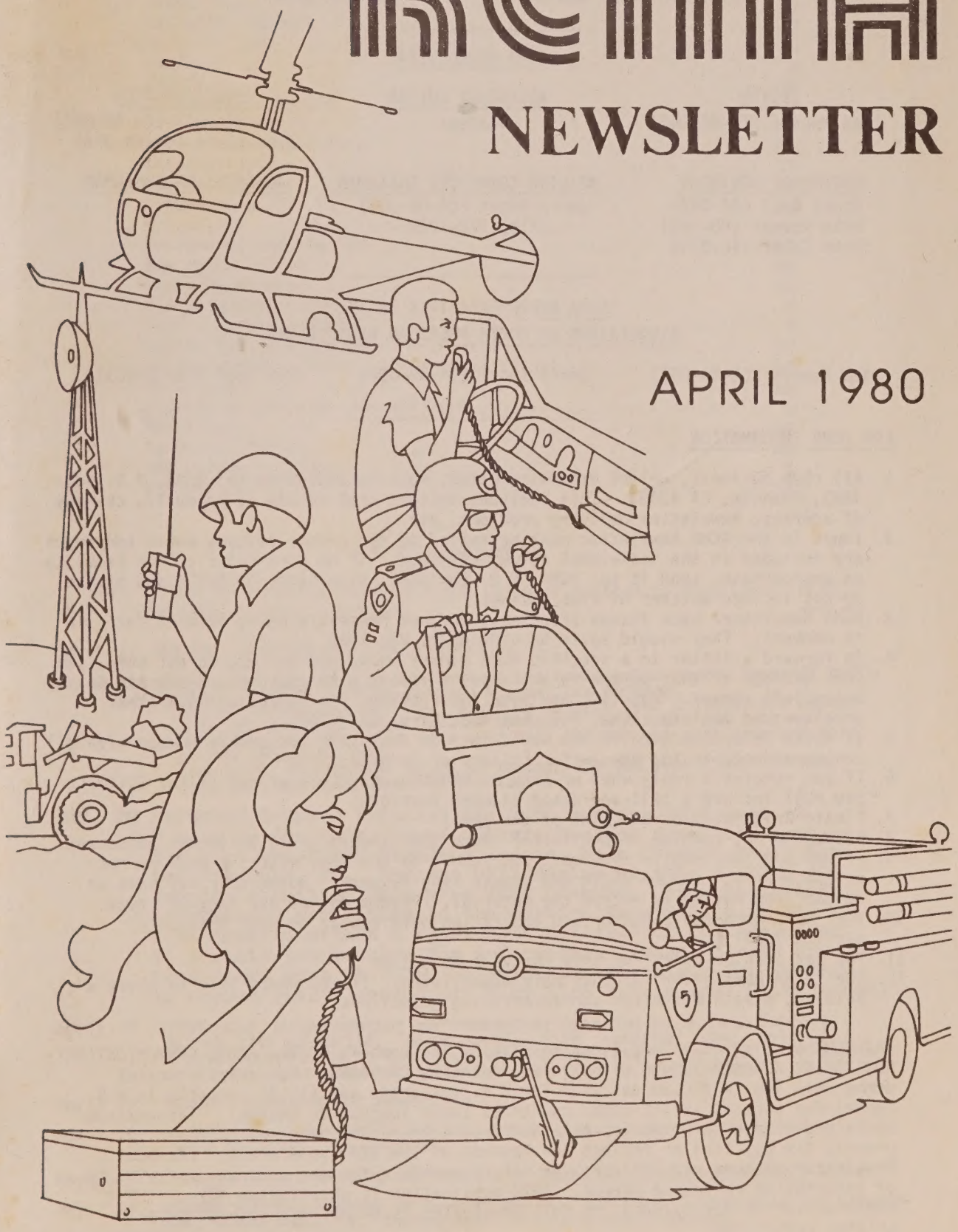
RCMA

NEWSLETTER



APRIL 1980

FIRST NATIONAL AND INTERNATIONAL ORGANIZATION
OF MONITOR RADIO LISTENERS

RCMA BOARD OF DIRECTORS

PRESIDENT
Noel Robertson (CA-LA-083)
(213) 965-6848 8AM-5PM

VICE PRESIDENT
John Clark (CA-OR-078)

SECOND VICE PRESIDENT
Joe Freezon (CA-LA-031)

SECRETARY
Bill Ell (CA-LA-185)
(213) 796-0804 8AM-5PM

TREASURER
Bob Moore (CA-OR-058)
(714) 842-3034

RCMA NEWSLETTER

EDITOR
Iden Rogers (CA-RI-001)

ASSISTANT EDITOR
Wanted!

PASTE-UP CREW
Bryan Hunnell (CA-OR-097)
John Clark (CA-OR-078)

EDITORIAL ADVISORS
Chuck Gysi (PA-005)
Mike Redman (MO-002)
John Coker (IL-010)

MAILING COMMITTEE CHAIRMAN
Jerry Short (CA-OR-002)
(714) 772-1259

ADVERTISING CHAIRMAN
Wanted!

RCMA REPRESENTATIVES TO THE ASSOCIATION OF NORTH AMERICAN RADIO CLUBS

Iden Rogers (CA-RI-001) Jerry Short (CA-OR-002) Bob Leef (CA-OR-033)

FOR YOUR INFORMATION

1. All club business, unless otherwise noted, must be addressed to: RCMA, P.O. Box 4563, Anaheim, CA 92803. This includes matters that relate to renewals, changes of address, Newsletter delivery problems, etc.
2. Input to the RCMA Newsletter must be mailed to the proper editors whose addresses are included in the individual column headings. If no particular column seems to be appropriate, send it to: RCMA, P.O. Box 4693, Riverside, CA 92514 and please do not include matters of club business.
3. RCMA Newsletter back issues (reprints) are not presently being offered for sale to members. They should again be offered by May 1980.
4. To forward a letter to a specific RCMA member whose address you do not know, put your message to that person in a stamped envelope with your return address in the upper left corner. Put this and your instructions for remailing in another envelope and mail to: RCMA, P.O. Box 408, Earp, CA 92242.
5. It would be appreciated if you would include your RCMA membership number with all correspondence to the Newsletter Editors or to Headquarters.
6. If you require a reply when writing to RCMA Headquarters or one of the Editors, you MUST include a self-addressed stamped envelope.
7. Please write only on one side of the paper.
8. Please do not combine in one letter items that should go to different addresses.
9. If you are inclined to type what you submit to the Newsletter, please do not exceed a 7-inch column width and please single-space. Doing this may save an editor from having to retype the material. Please do not use "*script*" type.
10. Your RCMA membership number and expiration date appear on your Newsletter mailing label.
11. You may join or renew for only one year at a time.
12. The "RCMA Newsletter" accepts paid advertising. If you would like to place a paid ad, please write for our advertising guidelines.

The RCMA Newsletter is published monthly by the members of the RADIO COMMUNICATIONS MONITORING ASSOCIATION, P.O. Box 4563, Anaheim, CA 92803. Subscription rate/membership fee is $10.50 per year for U.S. residents and $12.85 (payable in U.S. funds) for persons in all other countries (dues subject to change). Information contained herein is primarily obtained from members and does not necessarily present the position or reflect the opinion of the RCMA as a whole. The RCMA Newsletter editors and officers are not responsible for the accuracy or validity of information contained herein. This publication is copyrighted © . Reproduction of any material in this Newsletter is prohibited without prior written permission.

APRIL 1980 ISSUE NO. 50
© Copyright. All rights reserved.
RCMA, P.O. Box 4563, Anaheim, CA 92803

TABLE OF CONTENTS

	Page
Aircraft	40
ANARC News	5
Beginners Corner	33
Business, Etc.	25
Calendar	1
CANADA	24
Contact/Info Wanted	4
FCC Topics	36
Federal Gov't/Military	42
International	37
Low Band Skip	38
Marketplace	45
Miscellany	
Monitoring and the Law	20
New Members List	46
Photo Department	21
Public Safety - Central	9
Public Safety - East	7
Public Safety - West	12
Public Safety - West, Southern California	13
Railroads	22
Reports of Meetings and Officers	2
Satellites	18
Technical Topics	30
THE editor's column	3
VHF Marine	34

** Calendar **

Send notices of upcoming events for the Calendar section to John Clark, RCMA, P.O. Box 4563, Anaheim, CA 92803.

March 17 MONDAY deadline for the newsletter.

March 21 FRIDAY General meeting and Tour of the Los Angeles County Sherriff Radio Center. 8:00PM 1277 N. Eastern Avenue, Los Angeles.
From I-10 San Bernadno Fwy South on Eastern past 2 lights 1/4 mile. Look for small 3ft sign "1277 N Eastern" turn right and take an immediate left, proceed up a long hill through the main gate and park on the immediate left.
From I-60 Pomona Fwy North on Eastern 200 yds past "Sherriff Road" turn left and take an immediate left ....

MAR. 29 SATURDAY Greater Philadelphia RCMA members will meet at 2 p.m. in the Bala Cynwyd Library meeting room, Old Lancaster Road and North Highland Avenue, Bala Cynwyd, Lower Merion Township, PA. Members will decide at this meeting on forming a Philadelphia area RCMA chapter. Directions and information pertaining to the meeting were mailed to all RCMA members within a reasonable distance of Philadelphia. If you did not receive the information letter, please contact Chuck Gysi at (215) 657-5324 immediately. The library is conveniently located off City Line Avenue near 54th Street.

April 9 WEDNESDAY Board meeting and newsletter labeling at Anaheim Library Branch 1349 S. Euclid. Board meeting 6:PM Labeling 7:PM. This is a good opportunity to have your voice heard, assist the club, and catch up on the latest scanner activits. All members are welcome.

April 14 MONDAY deadline for newsletter

April 18 FRIDAY General meeting and Tour of Los Angeles Fire Control Center 200 N Broadway, Los Angeles.

May 6 TUESDAY Board meeting and newsletter labeling at Anaheim Library Branch

May 16 FRIDAY General meeting at Mercury Savings and Loan, Valley View and Lincoln Ave, Buena Park, Ca. Gordon West tentative guest speaker.

Reports of Meetings and Officers

Send reports of RCMA meetings and gatherings held to John Clark, RCMA, P.O. Box 4563, Anaheim, CA 92803.

RCMA ELECTION RESULTS

Noel Robertson	61	New President
John Clark	51	New Vice President
Joe Freezon	10	New Second Vice President
Bill Ell	8	

The election was set up so the person receiving the greatest number of votes would be President and the person receiving the second highest vote would be Vice President and the person receiving the third highest vote would be Second Vice President.

We conducted an opinion poll concerning the name of our publication. The new Board will decide if there will be a name change with the opinion poll results in mind.

No change	51
The Monitor	17
The RCMA Monitor	55
Other	6

SECRETARY AND TREASURER APPOINTED

Not more than one member volunteered to run for each of these offices, so the Board appointed the only two volunteers. We welcome Bill Ell (CA-LA-185) as Secretary and Bob Moore (CA-OR-058) as Treasurer.

TREASURER'S REPORT
For Period of January 16 to January 31, 1980*

Balance as of January 15, 1980			$ 825.39
Received for membership:			
New Members (91)	$ 794.07		
Renewals (21)	192.50		
Received for directory	91.00		
Received for sample Newsletters	2.00		+ 1079.57
Expenses:			
February/March Newsletter (printing, etc.)		$ 704.37	
Applications & info sheets (printing)		26.63	- 731.00
		Balance	$ 1173.96

* At the January Board Meeting, the Board established the fiscal year end for the RCMA as December 31. The monthly financial statements will now end with the last day of each month instead of with the 15th of each month.

From MICHAEL (IL-014): On Sunday, February 3, 1980, some Chicago area members met at a quickly arranged meeting at my house. In attendance were: Ed Sirovy (IL-004), Ron Smithberg (IL-009), John Arendt (IL-012), Michael Yanul (IL-014), Richard Mies (IL-021), Ray Prezell (IL-033), Michael Perlman (IL-044), James Oberg (IL-061), and Jeff McKnight (IL-064).

The subject of forming a Chicago Area Chapter was discussed and it was decided that an effort would be made to locate a centralized meeting location (perhaps a room in a Savings and Loan in the western suburbs) before we make any final plans. Future meetings in various members homes will be continued and encouraged. Ed (IL-004) and Ray (IL-033) have volunteered to handle information and ideas on forming a local chapter.

THE editor's column

Iden Rogers, P.O. Box 4693, Riverside, CA 92514

ASSISTANT EDITOR NEEDED

If you live in Orange County, California, are interested in helping to edit the RCMA Newsletter and feel you are qualified to do so, please contact me (the editor): RCMA, P.O. Box 4693, Riverside, CA 92514.

RCMA MAILING LIST NOT FOR SALE

Some members have wondered if we sell our mailing list. We have not sold it and, in fact, regard it as confidential and not open to inspection even by club members except for club officials. Each month many names and addresses appear in our new member list in the Newsletter. If any members receive advertising that is in any way related to RCMA, it could result from the new member list or perhaps to a very limited extent from unofficial regional member lists compiled by some members that somehow reach advertisers.

SENSITIVE FREQUENCIES

Two or three months ago members were asked to express any opinions concerning the publishing of sensitive frequencies since some had felt that we were not restrictive enough. TONY (NJ-005) volunteered to receive the mail and summarize the responses. Tony received only four replies so the issue isn't really an issue. The RCMA editorial policy is still to remain on the conservative side.

RCMA MEMBERSHIP RENEWAL RATE

A member inquired about the percentage of RCMA members who renew. This is hard to calculate easily because some renew late, some on time and some early. The number of renewing members have to be compared to the number of new members for a particular month 12 months earlier. We know the renewal rate is quite high. Many members enclose messages when renewing which express considerable enthusiasm about the club.

"POLICE CALL"

The 1980 Police Call (orange cover) is now available. It lists frequencies and call letters for police, ambulance, rescue squad, fire, paramedic, government, national parks & forests, newspaper & radio/TV reporters, and railroads. Nine volumes cover the U.S.

Vol. 1 - CT, ME, MA, NH, NY, RI, VT	Vol. 6 - DC, FL, GA, NC, SC, VA, WV
Vol. 2 - DE, MD, NJ, PA	Vol. 7 - AL, AR, LA, MS, OK, TN, TX
Vol. 3 - OH, MI	Vol. 8 - AZ, CO, ID, MT, NM, NV, UT, WY
Vol. 4 - IL, IN, KY, WI	
Vol. 5 - IA, KS, MN, MO, NB, ND, SD	Vol. 9 - CA, OR, WA

Visit your local radio store or order them by mail.

Price: $5.95 per volume, plus postage and handling.
Add $1.50 per volume for first class postage or
$.40 per volume for fourth class.
New Jersey residents - add 30¢ sales tax per volume.

Special: All 9 volumes...$44.00 (includes first class postage).

Send check or money order to: U.S. Radio Data, Inc., Lebanon, NJ 08833.

This may sound like an ad. Well----it is. RCMA is mentioned in this very popular directory and this brief plug for "Police Call" is the least we can do in return.

FREQUENCY LOOK UP SERVICE

In a recent issue two companies were mentioned that will look up station license info for a fee. Members using these companies were invited to send in their experiences regarding the quality of service. One was received from TONY (NJ-005):

"I have used Downtown Copy Center's services --- slow, expensive, but accurate. I usually send them a call sign or two and ask for a photocopy of license on file. A real help in locating transmitter, receiver sites, etc. Anyone utilizing service must count on spending at least 10 bucks. That's their minimum."

RADIO WEST

Radio West is a Southern California company with a good reputation that specializes in the sale of shortwave listening receivers and accessories. The company offers many modifications to shortwave receivers. This piece of information may seem out of place since the RCMA deals with frequencies above 30 MHz but really it is not. Radio West is intending to expand their line of services to include VHF and UHF receiver modifications and accessories. If you are interested in something for your scanner or tuneable VHF and UHF receiver that is apparently not available elsewhere, contact Radio West. If enough interest is shown in any particular modification or accessory, they may begin to offer it. A few that would interest me are: 1) a digital readout for the URR-35 UHF aircraft receiver, 2) highband tuneable preselectors, 3) scanner "S" meter, 4) 800/900 MHz converters, 5) higher quality i.f. filters, and 6) broadband 225-400 MHz preamp. Send your ideas to Radio West, 3417 Purer Rd., Escondido, CA 92025, (714) 741-2891. They also offer a catalog of SWL related receivers and accessories.

contact/info wanted

The purpose of this column is twofold: 1) CONTACT --- It helps members to contact other members. If you want to meet, telephone or correspond with other members (by letter or cassette tape) in a certain geographic area or with members who have similar listening interests, this is the place to say so. 2) INFO WANTED --- This column helps members to obtain information directly from other members on various subjects related to two-way communications monitoring above 30 Mhz.

Members who wish to contact you will do so directly, so be sure to give your phone number and best time to call and/or your address. Write to: Larry H. Brown, 1717 Leith St., Flint, MI 48506.

Member will be coming to New York City and Detroit, Michigan this summer to work at the national political conventions. Will need all the frequency information possible for these areas for police, fire, federal goverment, special events, command posts etc. All info will be very helpful as long as it is "confirmed." BOB SHERMAN (FL-007), Box 63-04, Miami, Florida. 33163.

Member wishes to speak or correspond with other members who are seriously interested in monitoring security and media activities at the following three events: 1) Republican Convention in Detroit, 2) Democratic Convention in New York City, and 3) Presidential Inauguration in Washington D.C. Serious inquiries only! TONY LOVING (NJ-005), 393 Grove St., Ridgewood, New Jersey 07450. (201) 325-6801 days or (201) 652-5252 evenings.

I would like to correspond with Illinois and Missouri members to exchange information on frequencies for all of the bands. KEN FREY, P.O. Box 521, Carbondale, Illinois 62901.

I would like to contact other Delaware and eastern shore of Maryland and Virginia members. DONALD R. BAKER (DE-001), RD 3. Box 236, Millsboro, Delaware 19966.

Member would like to hear from other members who use discone antennas on their equipment. TOM DAVIDSON, 5728 Birch St., Mission Kansas 66205. (913) 432-8921 evenings.

I would like information on decoding devices for voice scramblers. STEVE HATCHETT, 1931 Steven Dr., Edgewood, Maryland, 21040.

Minnesota members; interested in getting together for learning and/or sharing--possibly of forming a state/local chapter? Let me know your feelings or ideas on this. CHUCK STERER (MN-008), 2910 E. Franklin, Minneapolis, Minnesota 55406.

Robert Wyman FL 012 reports the Miami members are starting to form a chapter of R.C.M.A. We are looking forward to hearing from them.

ASSOCIATION OF NORTH AMERICAN RADIO CLUBS

NEWS HIGHLIGHTS

ANARC is a federation of the most responsible, well established radio listening clubs in North America. RCMA attained Full Member status in ANARC in 1977. For a list of the ANARC Member and Associate Member clubs send a self-addressed, stamped business size envelope with your request to the address below. For an annual subscription to the monthly "ANARC Newsletter" send $3.50 to: ANARC, 557 N. Madison Ave., Pasadena, CA 91101.

This year the ANARC convention will be right in the backyard of many RCMA members --- Orange County in Southern California. This will make it easy for many RCMA members to attend the most important and largest listeners convention in North America. Members from many of the various ANARC clubs will be in attendance and not just from Southern California but from many parts of North America. Represented radio listening interests will include long wave, medium wave/ BCB DXing, shortwave broadcast and utility listening and DXing, TV & FM DXing and monitor radio listening.

TWO NEW ASSOCIATE ANARC CLUBS ARE ADMITTED TO MEMBERSHIP

Having fulfilled the requirements for Associate Club membership as indicated in the ANARC Constitution and Bylaws, the San Diego DXers Club and World Shortwave Listeners Club were admitted as of January 1, 1980.

SAN DIEGO DXERS CLUB, 1826 Cypress St., San Diego, CA 92154. Dedicated to DXing in all modes, featuring in their monthly bulletin technical matters in "non-technical" language, receiver and equipment evaluations, and "Hot Tips" relative to all phases of the hobby (SW, MW, LW, UTES, TV/FM). Station logs and QSL reports are left to the larger clubs for coverage. Annual subscription price is $8.00 for North America; foreign air mail is $12.00 per year. List of product evaluations in back issues for a SASE. Back issues and sample bulletins are 75 cents each; six 15¢ stamps, or 2 International Reply Coupons. Larry Brookwell is Club President. Their club bulletin is a real "goldmine" of information on receiver evaluations that will be helpful to every DX listener. 60 members. Founded in 1978.

WORLD SHORTWAVE LISTENERS CLUB, 80 Hartsdale Ave., White Plains, N.Y. Devoted to worldwide DX listening, with articles, "pen-pal" lists, DX philatelic corner, news in brief of international SW activities. Well printed and edited. They have 69 members in North America and overseas. Founded in 1979. Bulletin, "DX Journal" is issued bi-monthly. Dues are $7.00 per year in North America. Overseas dues, $9.00 per year, U.S. funds. Sample copies are $1.00 each. Director and Publisher is Philip P. Morton. For DXers who wish to write to other DXers, worldwide, the club for you is WSWLC. Paul Flanagan of England is Assistant Publisher.

ANARC encompasses all radio listening hobby fields. Your particular interest is ably served by one or more of ANARC's specialized clubs - who are reliable and can be depended upon to work for the "Good of our Hobby".

COMMUNICATIONS WORLD 1980 PRINTS OLD ANARC DATA

We want all our Clubs and ANARC subscribers to know that ANARC is NOT responsible for obsolete data on "Clubs You Can Join" on Pages 26, 27, 28 of Communications World - 1980, published this month. For the record, ANARC sent the Editors a list of 25 corrections to their 1979 edition, in early August, 1979, with a request that they correct and revise their 1980 listings. And we have a Xerox copy to prove our statement. They have had time to revise - but did nothing and merely reprinted their 1979 copy. This is not responsible journalism. We suggest that complaints be sent, for inconvenience caused our Clubs by this "antiquated" listing, to: Alan H. Rose, Managing Editor, Communications World, Davis Publications, Inc., 380 Lexington Ave., New York, NY 10017. Mention ANARC.

Corrected copy was also mailed last summer to Communications Handbook and to World Radio TV Handbook for their 1980 editions. We have heard from WRTH so we are rather certain that their Club listings will be accurage as of their press time. ANARC really tries to serve our Clubs and subscribers.

ASSOCIATION of NORTH AMERICAN RADIO CLUBS

15th ANNUAL CONVENTION

ANARC --- 80

JULY 18 19 20, 1980

IRVINE, CALIFORNIA

University of California Campus

Convention Chairman
MR. STEW MACKENZIE
16182 Ballad Lane
Huntington Beach, CA 92649
United States of America

SPONSOR: Southern California Area DXers (SCADS)

CONVENTION COMMITTEE: Chairman - Stewart MacKenzie
Co-workers - Karen & Jim Young, Dave Browne, Don Johnson, Pete Grenier, Flo & Spence Naylor, Grant Manning, Don Schmidt, Mike Maghakian, Larry Kopriva and the San Diego DX Club.

CONVENTION HALL: UCI FINE ARTS CONCERT HALL

EXHIBITION HALL: UCI FINE ARTS GALLERY

LODGING: MESA COMMONS TOWNHOUSES MEALS: American Plan

TOWNHOUSE RATES: $23.00 per person per day single occupancy with meals included.
$20.00 per person per day double occupancy with meals included.
$28.00 per person per day suite occupancy with meals included (limited, sleeps 2)

If you live nearby or plan to stay elsewhere, the lodging rates do not apply.

BANQUET COST: $10.50 per person (optional). Prime Ribs of Beef Au Jus

REGISTRATION FEE: $12.00 per person in advance or $15.00 at the door. PARKING: Free in designated convention area.

AIRPORT: JOHN WAYNE AIRPORT - ORANGE COUNTY, 3 minutes from the University.

UCI RECREATIONAL FACILITIES: Heated outdoor swimming pool, 12 tennis courts (6 lighted), handball/racquetball courts, indoor/outdoor basketball courts, to name but a few of the facilities available for your enjoyment. Child Care services available.

LODGING RATE PREFERRED: $_____ Single $_____ Double $ _____ Suite

REGISTRATION: $12.00 BANQUET: $_____(Optional)

AIRPORT PICK-UP ... John Wayne Airport. Arrival Time _____ Flight #_____

TOTAL AMOUNT ENCLOSED: $_____

PAYMENTS: Make all checks payable to "ANARC 1980". Foreign remittance, including Canada and Mexico, by International Money Order or Bank Cashier's Check (in U.S. funds). NO personal foreign checks accepted due to high bank tariff charges/ exchange rates.

Return this application or a copy of it with funds to the 1980 ANARC Convention Chairman at the address listed above. QUESTIONS?? Please put on a separate sheet of paper and include an SASE.

Are you available to be a speaker at ANARC 1980? YES ____ NO ____

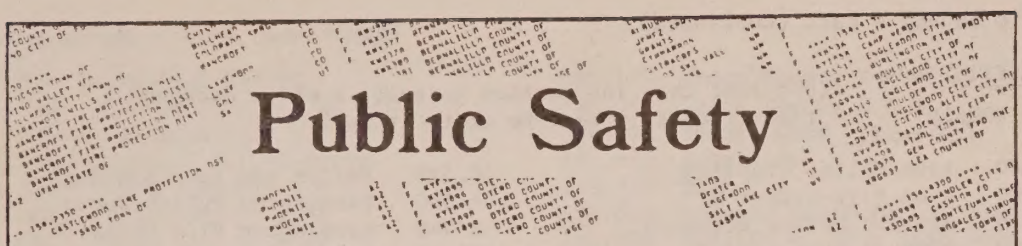
Your Name and Address ... Please PRINT in Block Letters ... Phone number Optional

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

COUNTRY _____ PHONE NUMBER _____



Public Safety

This column is for reporting Public Safety and Special Emergency frequency information, radio system details, radio codes, dispatch areas, unit numbering systems, etc. for police, sheriff, fire, forestry (except USFS), fish and game, highway patrol, state police, prisons, prisoner work camps, local government, highway & street maintenance, port authority/bridge maintenance, animal control, ambulances, paramedics, hospitals, life guards, ski patrol, search & rescue, flood control, civil defense and disaster organizations. Input and questions for this column must be sent to the proper regional Public Safety editor listed below.

PUBLIC SAFETY - EAST

Send Public Safety and Special Emergency frequencies, radio system details and questions for Connecticut, Delaware, District of Columbia, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia and West Virginia to: Richard Barnett, P.O. Box 428, Newton Highlands, MA 02161.

As I am writing this article in the month of February, and because it happens to be so close to Valentine's Day,I would like to take this opportunity to express my appreciation to all of those who have sent in such great frequency data! Your fine work helps to make this article interesting for all, even for those who don't care to contribute themselves. I would be fascinated to know if there are public safety communications going on in the states of North Carolina, South Carolina, West Virginia, Maine and Vermont as I have received no, or hardly any, information for these states. I hate to be always pleading for data, especially from the aforementioned states, but I want this column to be the best it can be, and the fullest it can be; therefore until I have a satisfactory response to the requests of mine I will not discontinue them. Remeber, if I do have this satisfactory response I speak of, then I can cut this opening paragraph out and have more space for the outstanding reports I know RCMA members are capable of sending in.

OHIO

From L. BENDICK (OH-025)

The Ohio State Highway Patrol is broken down into ten districts. Nine actual districts with Ohio turnpikes being the tenth. I've discovered that on 154.935 (Ohio LEERN Frequency) the districts have a time and radio check with the different posts within that district. District one having their at 1AM, district two at 2AM, etc. All posts give name and call letters at this time. Knowing when and where to listen sure helps as I've logged posts as far as 130 miles (VHF-Hi). Also, post numbers are assigned Alpha-numerically. Make a list of all 88 Ohio Counties putting them in alphabetic order, start with the first (Adams -no post) and place a 1, the second a 2, and so on. This will give you the post numbers for each county. My list is lacking #45, hence the 45th post. On Intersystem transmissions the posts call each other by these numbers -"Post 45 to Post 60."

The Frequency 45.22 is the channel used by the correction facilities and the state hospitals. From time to time you'll hear the Base tell the mobile unit to go to F-3 or F-4. These are 45.020 which is the Intersystem, traffic control and aircraft frequency; and 45.10 (this is also used by Liquor Control). With winter upon us the State Highway Garage or D.O.T. (snow removal) crews use 47.340.

The following is the District #5 (different from Ohio State Police districts) Ohio Department of Transportation radio network:

KQF801 = Hebron	KQF841 = Mt. Vernon	KQF853 = Zanesville
KQF804 = Coshocton	KQF842 = New Lexington	KQF876 = Newark
KQF840 = Lancaster		

Thank you very much Mr. Bendick and I hope you will send in the complete 1-88 post list for the Ohio State Police. This type of written out explanation of a radio system which Mr. Bendick has supplied is very informative and helpful. I hope everyone who sends in frequency data will also write up a report to go with the channels so as to afford all members in-depth information about the freqs.

CONNECTICUT

From DONALD (CT-003) (Don sent this information in quite a while back and I inadvertently forgot to write it up.)

45.380 Avon Police Dispatch
33.940 Avon Fire Dispatch
39.420 Bristol Police Dispatch
39.380 Bristol Detectives
46.420 Bristol Fire Dispatch
45.080 Canton Police Dispatch
33.940 Canton Fire Dispatch
33.740 Canton Fire Secondary
46.180 Middlesex County Fire

46.520 Police and town highway
46.580 Farmington Public Works
33.940 Farmington Fire Dispatch
155.715 U Conn Security -Frmngtn.
460.425 Newington Police Dispatch
460.275 Newington Detectives
154.445 Newington Fire Dispatch
156.000 Newington P.W., Ambulance
161.760 WPOP Radio -Newington

45.9800 New Britain Police Dispatch
453.275 New Britain Police Portables
154.190 New Britain Fire Dispatch
154.235 New Britain Fireground

CITY OF HARTFORD CONNECTICUT

460.050 Northside Police Dispatch -KCA330
460.200 Southside Police Dispatch -KCA330
460.375 Police Records -KCA330
460.400 Detectives, Car-to-Car, Traffic
154.310 Fire Dispatch
453.950 Public Works
453.375 Civic Center
453.325 Housing Authority
155.220 Professional Ambulance
161.640 WTIC Radio
453.000 Hartford Courant
154.540 Hartford Courant Alarm Room

WINDSOR LOCKS

453.350 Bradley Airport Maintenance
453.400 Bradley Airport Fire
33.9400 Bradley Airport Mutual Aid
453.500 Bradley Airport
453.550 Bradley Airport
154.695 Bradley Airport Security
154.965 Bradley Airport Security

NEW HAVEN

460.450 New Haven Police Patrol -KRF539
460.500 New Haven Poilce Patrol -KRF539
460.100 New Haven Detectives -KRF539
460.525 New Haven Area Ambulance
460.550 New Haven Area Ambulance
161.640 WTNH TV-8

155.595 Plainville Police Dispatch
159.030 Plainville Detectives
33.5800 Plainville Primary Fire
33.9400 Plainville secondary Fire
155.805 Plainville Public Works
460.025 Waterbury Police Dispatch
460.225 Waterbury Detectives
462.950 Waterbury Emergency Medical
33.9800 Waterbury Fire Dispatch
33.9200 Waterbury Fireground
155.750 Waterbury Water Dept.
45.6200 Simsbury Police Dispatch
33.9400 Simsbury Fire Dispatch
155.250 Southington Police Dispatch
158.955 Southington Detectives-mob.
33.5800 Southington Primary Fire
33.9400 Southington F.- Hartford Cty
155.280 Storrs UCONN E.M.S.
155.340 Storrs UCONN E,M.S.
453.400 Storrs UCONN Fire
154.665 Storrs UCONN Security
154.695 Storrs UCONN Security ch.2
39.8200 Storrs UCONN town tie-in
158.730 W. Hartford Police Dispatch
158.790 W. Hartford Police Detective
166.250 W. Hartford Fire Disptach
458.100 W. Hartford Fireground
156.180 W. Hartford Public Works
155.280 W. Hartford Volunteer Amb.
464.100 W. Hartford L & M Ambulance

CONNECTICUT STATE

47.3000 Highway Maint.-snow removal
47.3200 Highway Maint.-snow removal
47.3800 Highway Maint.-snow removal
47.6200 Power Co.'s Emergency Net
45.5200 Civil Defense
45.6000 Civil Defense
154.875 Motor Vehicle Department
453.400 State Fire Agency

When Don sent this information in he did include other more exacting data, such as Base-mobile systems and channel numbers. As some of the information may be outdated I didn't feel it was necessary to include this extra data as the entire list is very clear as it stands. I know I'm very redundant, but I urge Conn. RCMAers to send in supporting information -especially on State Police-. This is mainly why I printed a basic list; I want to give other Conn. members a base with which they can work or add to. If this concept is popular I'll continue with it.

GEORGIA

From MIKE (GA-012) LaGrange, Georgia/ Troup County

155.760	LaGrange Police	155.175	Troup County E.M.S.
155.760	LaGrange Utilities	155.340	Troup County E.M.S.
154.415	LaGrange Fire	154.905	Intercounty
155.490	Troup County Sheriff	154.935	Intercity
154.340	Troup County Fire	155.370	Tact III
154.280	Troup County Fire	154.680	Georgia State Patrol BASE
45.560	Troup County Fire	154.800	MOBILE/ 42.02 = BASE-BASE

Mike asked for help in finding the Georgia Bureau of Investigation frequency. From here I can't help him, maybe someone else can. Ed Soomre, a good friend of mine, asks if anyone could supply him with information on the 33.900 network in the southern part of New Hampshire, especially numbering series etc. Ed is also interested in any data on State Department of Public Works radios and Natural Resources -Forestry and forest fire control- radio networks for any New England state. You can contact Ed at 1 Alcott Drive, Northboro, Mass. 01532; or you can phone him at 617-393-6052. Eddie Muro of New York would like to know of any other New York City Fire channels other than the ones listed in the past columns. He is especially interested in the frequency that NYFD uses to deploy men and converse with men inside buildings. Finally, for those of you who did not see last months column, I am seriously considering developing a Massachusetts or better yet New England chapter of the RCMA so area members can meet each other and exchange ideas. I've had some good response to this proposal and I am hopeful others will decide to drop me a line if they have any interest in this at all. Remember, if not enough people are interested in helping out then the idea just won't get off the ground.

PUBLIC SAFETY - CENTRAL

Send Public Safety and Special Emergency frequencies, radio system details and questions for Alabama, Arkansas, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, Tennessee and Texas to: Mike Redman, P.O. Box 1177, St. Charles, MO 63301.

Send material and questions for Illinois, Indiana and Wisconsin to: John Arendt, 327 Boulder Hill Pass, Oswego, IL 60543.

Greetings and welcome to another Public Safety Central Column. Before we dig in, I'll make one last mention of the RCMA Spring Festival to be held here April 12. While it's probably too late to get you a mailing on the event, last minute details and directions may be had by contacting myself at 314-946-4331 or John at 312-554-3156. I'm hoping to meet a lot of you there! Now before we get to this month's information by state, here are some excerpts from a letter written by BILL & BARB MI-009 on renewal of their RCMA membership:

> "[I would like too] express how pleased we have been with the periodicals we have received each month and the enjoyment we have had from our scanner since joining the organization. [After getting our scanner] LARRY (MI-001) educated us, guided us, and introduced us to some other very nice Michigan members"
> "I sincerely hope your fine Editor is able to continue his fine job with the Newsletter..."

I agree. I sincerely hope our fine Editor is able to continue his fine job with the Newsletter!

LOUISIANA

Data received from Louisiana has been somewhat sparse. I would like to encourage our members from Louisiana to write- not only me, but Mr. C. N. Wells (LA-00?), a new member from Baton Rouge. Mr. Wells is new not only to the RCMA, but to monitoring as well. He would appreciate help from any of his neighbors in Louisiana in 'getting started'. Write to Mr. Wells at Rt. 7, Box 213, Baton Rouge, LA. 70807.

MISSOURI

While it's pretty hard to top DAVE (MO-009)'s contribution of last month on the St. Louis Police Radio system, I would like to make one humble addition. Upon completion of radio assignments, a radio disposition code is given along with the 'in service' code. While

most of this will be given through the FLAIR control box (not over the air), there will be times when it will be heard. The St. Louis Police commenced using the present all number numbering system in 1974 when FLAIR was introduced. Prior to this, these disposition codes were given in letter form. Some of the suburban St. Louis departments have adopted them in letter form, so I'll show both the letter and numerical identifiers:

		UNFOUNDED
A	80	No bonafide incident, but have name of witness
B	81	No victim or witness can be found
C	82	No such address
D	83	Disposition previously submitted on same incident, or by a different car
		PEACE DISTURBANCE & COMPLAINT
E	84	Perpetrator gone on arrival, No arrest, summons, prosecution, or injury
F	85	Peace Restored, no arrest, summons, prosecution, or injury
		FIRE
G	86	Fire, no injuries, no explosion or arson expected
H	87	False alarm of fire
		PROWLER
I	88	No description of subject and/or pertinent information
		MISCELLANEOUS HAZARD
J	89	Other agency notified, no injuries, safety not impaired
		MISCELLANEOUS INCIDENTS
K	90	Sick case, not police personnel, no poison, death not apparent
L	91	Accidental Injury, not police personnel, death not apparent
M	92	Suspicious Person/Auto/Occupant, person can account for presence, auto not stolen or wanted
N	93	Call for Police, no police service necessary
O	94	Alarm Sounding, activated alarm- no entrance attempt; holdup alarm- accidentally set off
R	95	Non criminal incident, no written report required, no other code provided

IOWA

From MIKE (IA-011); Des Moines area:

Iowa Law Enforcement Academy, Camp Dodge		154.905	KRJ719 B/M
Capitol Security Police	154.680 M,	155.670	KIT886 R
State Fairground Police	154.740 M,	156.090	KOE393 R

OKLAHOMA

From KEN (OK-006); Oklahoma City area:

	Rptr:	Output	Input
F1 Police (car to car & warrants)		159.090	156.030
F2 Police (south area dispatch)		159.030	156.090
F3 Police (detectives)		158.730	155.730
F4 Police (central area dispatch)		158.790	155.790
F5 Police (north area dispatch)		158.970	155.970
City Park Rangers		151.310	159.405
City Housing Authority Police		158.805	153.965
Public Events, Crown & Traffic Control		158.925	155.955
Oklahoma County Sheriff		37.260	
F1 Fire (Primary operations)		453.150	458.150
F2 Fire (Primary operations)		453.350	458.350
F3 Fire (Extreme south city)		453.600	458.600
F4 Fire (Liaison with other area FDs)		453.300	458.300
	also	153.890	153.950
F5 Fire (fire ground)		453.350	
F6 Fire (administration)		453.700	458.700
F7 Fire (maintenance)		453.450	458.450
Fire Station Dispatch		155.055	
F1 AMCARE Ambulance (dispatch)		153.755	
F2 AMCARE Ambulance (hospital intersystem)		155.340	
F3 AMCARE Ambulance (paramedics to hospital)		453.475	458.475
F4 AMCARE Ambulance (maintenance)		41.050	
F1 Will Rodgers World Airport (maint./admin.)		158.775	154.040
F2 Will Rodgers World Airport (Police)		158.895	153.775
Local Government		453.650	458.650
Animal Welfare Department		453.825	458.825
City Zoo		153.815	158.940

Public Safety - Central (continued)

MASSTRANS Public Transit & Parking	453.725 458.725
City Schools	155.835
F1 City Water Department	453.225 458.225
F2 City Water Department	453.625 458.625
F3 City Water Department	453.875 458.875
City Pagers	154.935

TEXAS

From KEN (OK-006) & KEN (TX-003); Texas State information:
Statewide Base to Mobile, 155.460; mobile to base, 154.680
Interagency mobile to mobile, 154.950, mobile to base, 154.950;
interagency base to base 155.370
Mobile units are set up as follows:

F1 154.680T/155.460R Mobile to Base
F2 155.460T/155.460R Mobile to Mobile
F3 154.950T/154.950R Interagency Mobile to Mobile
F4 154.950T/155.370R Interagency Mobile to Base
F5 to F8 set aside for expansion

And now for our members in Illinois, Wisconsin, and Indiana, Here's John...

Greetings from IL-012. Lots of material to cover in this month's column - so down to the business at hand.

ILLINOIS STATE POLICE We focus attention on Dists. 14, 14A, and 10 this month. A new low powered transmitter was placed into service during the late summer months - heard by this editor giving a call sign of WXR313. Location was unknown until recent disclosure by Tom (IL-030). The transmitter site is in Ft. Madison, Ia. and is "remoted" to Dist. 14 - Macomb using freqs. of 42.50, 42.60, 154.68, 155.46 and 155.475. The new "Police Call" will show a location of E. Ft. Madison, Il. - but no such place can be found on the official state road map. (This transmitter serves the low lying areas along the Mississippi River - similar to the "Alma, Wi." transmitter operated by the Minnesota State Police). Michael (IA-011) reports a new "HF2" in limited operation for Dist. 14. This editor confirmed the freq. for Dist. 14 (and also 14A) - thanks to some freak radio reception conditions here late last year. A new "HF2" of 154.695 has been placed into operation by Dist. 10 at Pesotum per information received from Sam (IL-048).

ILLINOIS S.D.'s on 159.15 To Brian (WI-) - the unidentified station that appears underneath or in addition to the Lafayette, Wi. S.D. on 159.15 could be Rock Island S.D. or Kane S.D. (The latter employs speech inversion scrambling and also has an identical repeater input freq. of 154.830).

PIATT COUNTY, IL. S.D. Sam (IL-048) has sent on details on new freq. assignments. 155.595 is used as repeater output or simplex car-car freq. (Repeater input believed to be 158.910). The old 39MHZ freqs. are also still in use.

CHICAGO, IL. P.D. Ron (IL-009) did pass on a most interesting Chicago Tribune article - about surveillance by the "Central Intelligence Unit". This organization uses a new computerized radio system involving freq. - switching techniques. Frequencies in use - not the well-known 460 MHZ channels or the 800 MHZ data channels - are being "discovered" at this time, but will not be printed in this column due to their sensitive nature.

DECATUR, IL. P.D. A new communications system was recently placed into service. Utilizing a repeater operating on 460.100, hand-held and clothing-attached portable units form the nucleus of the new system. Six satellite receivers scattered throughout the city also form part of the system. Thanks to Sam (IL-048) for the newspaper clipping taken from the Decatur Herald.

CHICAGO, IL. F.D. has apparently combined "Emergency" and "CHIPS" by using "motormedics" (motorcycle paramedics). Two cycles - operating as a pair - are being used in the downtown Loop area. Each motorcycle carries basic fire - suppression and paramedic equipment and has radio contact with modular ambulances and the fire alarm office. A similar operation was previously instituted by the suburban Northfield Rescue Squad and has proved successful. The idea - originally conceived by a Lake Forest paramedic - was based on similar situation in use on the West German "Autobahn." Thanks to Kirk (IL-024) for a most interesting clipping taken from the Chicago Sun Times.

Public Safety - Central (continued)

FT. WAYNE, IN. P.D. Mark (IN-014) has given complate details on frequency usage:

155.610 "F1-Information"	Rptr Out	(158.97 In)
155.535 "F2-Dispatch"	Rptr Out	(158.73 In)
155.790 "F3-Car to Car"	Rptr Out	(159.21 In)
155.670 "F4-Detectives"	Rptr Out	(159.03 In)

One of the 460 MHZ freqs. is reportedly in use by vice squads.

GRANT COUNTY, IN. S.D. Mark (IN-014) reports new freq. 154.785 "F6" now in use. Call sign KLL509.

PORTER COUNTY, IN. S.D. This editor has recently observed a control (or base) plus mobiles on new freq. 154.710. Call sign of KZI 828?

INDIANA STATE HIGHWAY COMMISSION Dave (IN-002) has sent on detailed inforamtion to supplement last month's freqs. The state into 6 "districts" - each having its own plus 5 (or 6) additional subdistricts. They are listed as follows:

(W. Central) Crawfordsville "610" and "612" - Terre Haute "611" KEM685; Fowler "613" KEM691; Frankfort "614" KFK672; Greencastle "615" KFK675; and Veedersburg "616" KFI612.

(Northwest) Ft. Wayne "620" and "623" KBU405 - Warsaw "621" KFK671; Goshen "622" KEM683; Angola "624" KFI608; Wabash "625" KEM684; and Bluffton "626" KFK670.

(E. Central) Greenfield "630" and "632" - Indianapolis "631" KFK673; Centerville "633" KEM690; Anderson "634" KEM 686; Tipton "635" KFI610; and Ridgeville "636" KFI609.

(Northwest) LaPorte "640 and "641" - Monticello "642" KEO249; Plymouth "643" KFR640; Rennselaer "644" KFI614; Valparaiso "645" KEM692; Winnamac "646" KFI611; and Gary "647" KJD209.

(Southeast) Seymour "650" KBT805 - Aurora "651" KEU997; Bloomington "652" KFI 583; Columbus "653" KFK677; New Albany "654" KEM688; Madison "655" KFI582; and Scottsburg "656" KTZ284.

(Southwest) Vincennes "660" KBU406 - Linton "661" KFK674; Dale "662" KFK676; Evansville "663" KEM687; Paoli "664" KEM689; Branchville "665" KXX558; and Petersburg "666" KFI613.

Call signs for Crawfordsville, Greenfield, and LaPorte are currently unknown. Truck #43 of the Crawfordsville Dist. would be known as #1043 and truck #43 of the Crawfordsville Subdistrict would be known as #1243.

In the last several months that I've edited this portion of the "Public Service - Central" column, I've only had one communication from the WI area. Remember, this is your column too. (Surely there must be some news and views up in WI that you would want to share with the rest of the "RCMA" world).

Until we "meet" again next month (via the newsletter) or sooner - through your notes, letters or other means of communication - I leave you with this thought: Happy Monitoring!

Well, that's it for this month; see you all next month if not before at the RCMA Spring Festival. Don't forget to write!

PUBLIC SAFETY - WEST

Send Public Safety and Special Emergency frequencies, radio system details and questions for Alaska, Arizona, California (except 7 Southern California counties), Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming to: Lyle Galdiera and Bob Gehri, 3205 SW Corbett, Portland, OR 97201.

Send material and questions for the Southern California counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura to: Eric Christensen, 2360 Brentford Rd., San Marino, CA 91108.

Well here it is...time once again for another edition of Public Safety West. This one's going to be on the short side for a couple of reasons: 1. very little has been sent in and 2. with the D.B. Cooper story breaking here in Portland Bob and I have bearly had a chance to relax a little much less think about the column. Before we get started, I want to tell you about a new book that is out called 1980

Police And Fire Frequency Listing For Northwest Oregon And Southwest Washington... put out by none other than Bob Gehri (WA-007). A must for anyone in Oregon and Washington. For a copy of the book anywhere in the USA send $6.95 plus $1.00 postage and handling to: Police And Fire Frequency Listing
P.O. Box 17221
Portland, OR. 97217

By the way, the update service in this one really works...which keeps the book growing month after month.

NOW ON TO THE COLUMN!!!

ARIZONA

ERIC (AZ-003) says the Arizona Department Of Public Safety Criminal Investigation on 155.090 have now brought in the good old scrambler (type unknown) as of the first of the year.

South Tucson Police Department

PD	F-1	KOB-339	156.210
PD	Possible F-2	KOB-339	154.04

Unit Numbering System

Charlie-1....Chief of Police
Lincoln-1....Leutenant
Adam-1.....Administrative Assistant (sergeant)
Charlie-Mary-1....City Manager
Sam-1.....Dog Unit
Mary-1.....Motorcycle Unit

All field officers are identified by badge numbers and there is no series for sergeants, patrolmen or investigators.

During an emergency, all command officers have an extra frequency for operations 155.610 (Pima County southside sheriff's freq.). When in use they ID themselves as South Tucson L1 or by the assigned badge number.

NORTHERN CALIFORNIA

LARRY (CA-SA-003) has a correction for Bay Area CHP.

Zone III (Golden Gate Division)

Oakland, 25 Hayward should be listed on the new "TAN" frequency.

OREGON

I, LYLE (OR-009), have a correction of my own. In the last edition GEORGE (OR-001) listed frequencies and stations for Oregon State Police. After talking with several troopers in Multnomah and Beaverton offices I find that George's list is correct in the files down in Salem. However, this is not the way it pans out in troopers' cars. According to troopers themselves...car frequencies appear in this order:

F-1	42.88	Division 1 Northwest Oregon	F-4	42.86	Division 4 East
F-2	42.94	Division 2 West-Central	F-5	42.56	Division 5 Central
F-3	42.82	Division 3 Southwest	F-6	42.90	Aux-Salem Eugene
			F-7	42.92	Aux-Portland Area
			F-8	42.79	Airplane to Car

154.935 Hand Held Portlables-Portland Area
42.44 Not in use at this time will soon become tactical frequency for all divisions.

Some of the OSP station frequencies must also be changed.
In Division 1 change stations 11 Milwaukie, 11-A Government Camp and 19 Portland frequencies to F-7.

In Division 5 change stations 51 Bend, 51-A Madras,51-B Prineville, 53-A Hood River, 56 Klamath Falls, 56-A Gilchrist, 56-B Lakeview, and 56-C Odell Lake to F-5.
Also in division 5 change stations 51-C Warm Springs and 53 The Dalles to F-7.
One final change...move Arlington in Division 4 down to Division 5 on F-5. Station unknown at this time.

Q & A

From BOB (WA-007). Many of the Daytona type cars driven in races all over the country by Richard Petty, Cale Yarborough etc. Does anyone know freqs used for race car-to-pit? Antennas on the back of cars suggest UHF band.

EDITORS NOTE:

AT THE OUTSET OF THIS COLUMN BOB AND I TOLD YOU THAT PUBLIC SAFETY WEST WOULD LIVE AND DIE BY YOUR CONTRIBUTIONS. AT THIS POINT WE CAN TELL YOU THAT PS WEST IS DYING A SLOW DEATH!!! WE REFUSE TO KEEP THE COLUMN ALIVE...THAT MUST COME FROM YOU. IF YOU HAVE CRITICISMS AND COMMENTS WE'RE READY TO LISTEN BUT AT THE SAME TIME SEND US SOME INFO.

PUBLIC SAFETY - WEST, SOUTHERN CALIFORNIA - Eric Christensen, Editor

From ERIC (CA-LA-045):

By now, most of you have already seen the "slight" printing error in the FEB/MAR 1980 issue of the R.C.M.A. Newsletter, primarily pages 21 thru 24. When I assembled and sent the P.S. West-So. Cal. section, it was without major errors. Unfortunately, this is not

the way it came from the printers. Oh well, "C'est la vie!" I hope most of you did not take too long in figuring out that to read my article, all one need to do was to: Read pg. 19-21 as usual, then skip to pg. 23, then back to pg. 22 for the "grand finale!" We all need a little challenge, now and then! Right?!

As I stated in an earlier issue of the R.C.M.A. Newsletter, I am desirous of C.H.P. unit numbering/beat numbering systems for any and all areas of Southern California; infact, if you have some other areas, send them in and I'll try to sneak them in! So far, member support has been somewhat less than what I would like to see; especially since I find myself doing 90% of the research for this column. I have only received support from a very small percentage of a fairly large quantity of members in the Southern California area. I am getting a larger percentage of comments from members OUTSIDE of our area; ie: Northern California and several eastern states, especially Indiana, Illinois, Ohio, and New York and Florida. Come on you Southern California guys, the R.C.M.A. started out as a Southern California club; but has been supported by members from areas other than home town members.

Things in demand: Does anyone have unit numbering/beat systems for the following agencies: Pasadena Police Dept., Los Angeles County Sheriff Dept. (only Lakewood & Temple City have been listed so far in R.C.M.A.!) Riverside County Sheriff, San Bernardino County Sheriff, San Diego County Sheriff, CHP San Diego, CHP Ventura, CHP Santa Ana, etc., etc... I have NEVER heard anything from any R.C.M.A. members in Riverside or Imperial Counties. Come on guys, get with it!!!

****

From JIM (CA-SB-005):

POLICE DEPARTMENT-City of San Bernardino — Freq 1: 155.655 MHz
Unit Numbering System — Freq 2: 156.210 MHz

ADAM	Graveyard Shift Patrol	IDA	I.D. Technicians
BAKER	Swing Shift Patrol	LINCOLN	Lieutenants
CHARLIE	Day Shift Patrol	SAM	Sergeants
EASY	Motorcycle Traffic	VICTOR	Chief, Asst. Chiefs, Capt.
DENVER	Detectives	X-RAY	Metro or SWAT

Beat areas 1, 4, 5	South of Baseline, West of I-15
Beat areas 2, 3, 6	East of I-15, South of 9th St.
Beat areas 7, 9, 10, 11, 12	East of I-15, North of 9th St.
Beat area 8	North of Baseline, West of I-15.

****

From ERIC (CA-LA-045):

POLICE DEPARTMENT-City of Stanton — Frequency: 460.075 R

All police units in the City of Stanton have a five digit unit number; the first two are always "35", indicating "Station 35" in Orange County. Patrol units are all in the "600" series.

35100	Chief of Police	35631, 632, +	Swing Patrol
35201, 35202	Captains	35641, 642, +	Cover Shift
35400+	Narcotics	35610, 620, +	Sergeants
35611, 612, +	Graveyard Patrol	"A"	Senior Officer
35621, 622, +	Day Shift Patrol		

FIRE DEPARTMENT-City of Long Beach — Station Numbering System

Operations: 153.95 MHz KMA715

HEADQUARTERS-Station 1:	100 Magnolia	Station 12:	6509 Gundry Ave.
Station 2:	1645 E. 3rd. Street	Station 13:	2475 Adriatic Ave.
Station 3:	1222 Daisy Ave.	Station 14:	1838 E. Wardlow Rd.
Station 4:	411 Loma Ave.	Station 15:	Pier C, Berth 22
Station 5:	7575 E. Wardlow Rd.	Station 16:	4250 Donald Douglas Dr.
Station 6:	835 Windham Ave.	Station 17:	2241 Argonne
Station 7:	2295 Elm Ave.	Station 18:	3361 Palo Verde Ave.
Station 8:	5365 E. 2nd St.	Station 19:	3559 Clark Ave.
Station 9:	3917 Long Beach Blvd.	Station 20:	1830 W. Ocean Blvd.
Station 10:	1417 Peterson Ave.	Station 21:	Yacht Landing, La Marina
Station 11:	160 E. Market St.	Station 22:	6340 Atherton St. @ CSULB

Public Safety - West (continued)

From DWAYNE (CA-OR-):

County of Orange-Net Six Area Fire Departments Station Numbering Systems

HUNTINGTON BEACH F.D. (Station 82) (For frequencies, see below)

Murdy Station 8207, 8221*, Medic 61 & Rescue/Salvage
Heil Station 8203
Warner Station (PCH) 8205
Gothard Station 8209, 8201, Current Battalion Chief
Lake Station 8208, 8222*, Medic 63
Bushard Station 8204
Magnolia Station 8210

NOTE: The Joint Powers Training Center is located at the same location as the Gothard Station.

WESTMINSTER F.D. (Station 87)

Station # 1: (Goldenwest St.) 8704, 8726*, Medic 64
Station # 2: (Moran St.) 8701, 8702, 8703

FOUNTAIN VALLEY F.D. (Station 80)

Station # 1: (Bushard St.) 8011, 8021*, Medic 62
Station # 2: (Newhope St.) 8012, 8013

SEAL BEACH F.D. (Station 81) (NOTE: Info uncertain re Station 81)

Station # 1: (8th St.) 8101, 8104
Station # 2: NOT IN USE
Station # 3: (Beverly Manor Dr.) 8105, 8121, Medic 65

****

GARDEN GROVE F.D. (Station 72) Frequency: 46.26 MHz

Station H.Q.	Acacia Pkwy. (Medic 41)	Station # 5:	Western & Park (Medic 42)
Station # 2:	Gilbert & Skylark	Station # 6:	Chapman & Debbie
Station # 3:	Trask & Harbor	Station # 7:	Reading & Brookhurst
Station # 4:	Valley View & Belgrave		

SANTA ANA F.D. (Station 71) Frequency: 46.34 MHz

Station # 1:	17th & Flower	Station # 6:	MacArthur & Towner
Station # 2:	4th & Mabury	Station # 7:	Greenville & Warner
Station # 3:	Raitt & Franklin	Station # 8:	Newhope & 5th
Station # 4:	Broadway & Edinger	Station # 9:	Grand & Dyer (TRAINING)
Station H.Q.	Walnut & Sycamore	Station # 10:	Old Grand & Santa Clara

NOTE: Re fire department equipment numbers, (*) indicates: ladder truck.

From ERIC (CA-LA-045):

County of Orange-Public Safety Radio Systems

FIRE NET # 1:	46.14 MHz	Primary Dispatch-Orange County Fire (Station 91)
FIRE NET # 2:	46.06 MHz	County wide Mutual Aid. (154.28 MHz Statewide Mutual Aid)
FIRE COMMAND:	46.48 MHz	County wide Coordination. All agency Fire Ch. 3
FIRE X-NET:	46.52 MHz	County wide Coordination. All agency Fire Ch. 4
FIRE NET # 3:	46.32 MHz	Primary Dispatch: La Habra, Brea, Buena Park, Fullerton
FIRE NET # 4:	46.26 MHz	Primary Dispatch: Anaheim, Garden Grove, Orange, Stanton
FIRE NET # 5:	46.34 MHz	Primary Dispatch: Santa Ana
FIRE NET # 6:	46.28 MHz	Primary Dispatch: Fountain Valley, Huntington Beach, Seal Beach, Westminster
FIRE NET # 7:	46.16 MHz	Primary Dispatch: Laguna Beach, San Clemente
FIRE NET # 8:	46.44 MHz	Primary Dispatch: Newport Beach, Costa Mesa
"	"	Mutual Aid: Santa Ana

PARAMEDIC DISPATCH RADIO - BioMedical System

Dispatch 1:	462.950 R	Orange County "Control 1"		Used to assign BioComm Chan.
Dispatch 2:	462.975 R	Orange County "Control 1"		Backup for Dispatch 1
BioComm Ch 1:	463.000/468.000	Ch 5:	463.100/468.100	NOTE: BioComm Channels
Ch 2:	463.025/468.025	Ch 6:	463.125/468.125	1 thru 8 are used by
Ch 3:	463.050/468.050	Ch 7:	463.150/468.150	paramedic ambulances to
Ch 4:	463.075/468.075	Ch 8:	463.175/468.175	communicate w/hospital.

Hospital Emergency Administrative Radio (H.E.A.R.) Hospital Coordination system
County: 155.34 MHz Regional: 155.28 MHz

Public Safety - West (continued)

Office of Emergency Services (O.E.S. State of California) 153.755 B/154.98 M MHz

Calif. Law Enforcement Mutual Aid Radio System (CLEMARS) 154.92 MHz
Calif. Law Enforcement Voice Radio Contact (CLERS) 158.79 R/155.453 (?) M

Marshal's Office-County of Orange 506.8625 R **

LAW ENFORCEMENT U.H.F. RADIO SYSTEM

Sheriff's Office-Primary Dispatch	460.425 R	"Yellow" Station 18	KMA752
Mutual Aid-North County All Depts.	460.400 R	"Orange North"	"Control 1"
Mutual Aid-South County All Depts.	460.200 R	"Orange South"	"Control 1"
Car to Car-Simplex All Depts.	460.150 S	"White"	
Car to Car-Task Force All Depts.	460.500 R	"Blue"	"Control 1"
County Wide EMERGENCY/Mutual Aid	460.025 R	"Red"	"Control 1"
Information Access All Dept	460.300 R	"Purple"	"Control 1"
Mobile Teleprinter Channel	506.3625 B		"Control 1"

NOTE: City Law Enforcement frequencies are referred to as the "Green" channel.

"Green 1"	460.325 R	"Green 5"	460.475 R
"Green 2"	460.050 R	"Green 6"	460.100 R
"Green 3"	460.275 R	"Green 7"	460.175 R
"Green 4"	460.250 R	"Green 8"	460.075 R

*NOTE: Fire Dept. frequency 46.38 MHz is also known as "TAC 5". It is in use as the crash crew frequency at Orange County Airport. In July 1980, the California Department of Forestry (CDF) will split from Orange County Fire Department, and O.C.F.D. will become solely responsible for fire services. For now, monitor C.D.F. local activities on 151.325 MHz (R).

**NOTE: For detailed information re Orange County Marshal's Dept., see listing in November 1979 issue of R.C.M.A. Newsletter.

ATTENTION: Anyone interested in detailed maps of C.H.P. Southern California area assignments; Long Beach, Newport Beach, Huntington Beach, Los Angeles Police Departments beat area maps, send a S.A.S.E. plus several extra stamps (or whatever you deam fair) to cover photocopying expenses to: ERIC (CA-LA-045) Similar information will be appreciated, and reprinted for all members to enjoy & use. THANX.

From WALT (CA-OR-129) and ERIC (CA-LA-045):

Monitor the Long Beach Gran Prix

460.450 R	Long Beach Police Dept. Chan 4	Traffic Control, etc.
460.025 R	Long Beach Police Dept.	Misc. usage
460.125 R	Long Beach Police Dept. Chan 1	Downtown area Dispatch Channel
153.95 BM	Long Beach Fire Dept.	
153.74 BM	Calif. State University Police	(Headquarters Building, CSUC)
	Calif. State University, Long Beach Police	(KLK542)
151.865 BM	Long Beach Convention Center Security	
151.43 R	Calif. State Dept. of Fish & Game (Long Beach Headquarters)	
151.625 M	Race Sponsor frequency: Admission, crowd control, credential info.	
154.60 M	Possibly S.C.C.A. Fire & Crash info.	
154.57 M	" " " "	" Used at Ontario Speedway.
464.500 M	Possibly racing team frequencies.	
464.525 M	" " " "	
464.550 M	" " " "	
154.54 M	Unknown if used at L.B. Gran Prix. Used at Riverside Speedway.	

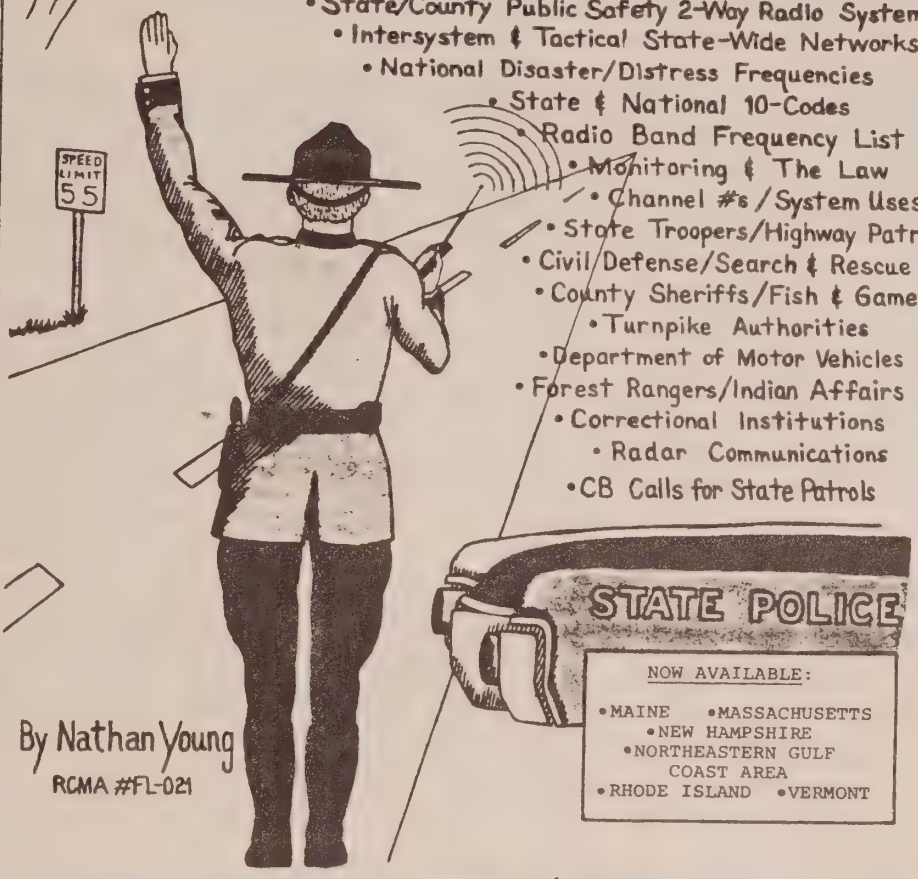
NOTE: You might also try several of the News Media frequencies as listed in the December, 1979 R.C.M.A. issue. Also try several business band frequencies, as they may be used by some race teams. Monitoring the C.H.P. "White", "Purple", "Gold", and "Blue" (42.56 B, 42.40 B, 42.12 B, and 42.34 B MHz respectively) may prove interesting for traffic conditions before and after the race. Aircraft may be heard on 122.75 MHz AM.

From Bryan - KA6IIX

For Eric and myself we are Southern California hams interested in contacting other RCMA Hams via radio to chat about the RCMA. First we need to locate an open repeater to formulate these ideas into operating fact. Guidelines: 1. Use the 2 meter band between 146-148 MHZ. 2. Use a large coverage repeater for initial contact. Note the following are amatures on 2 M: Noel - N6CIF on 146.82, Chuck WB6IAD on 146.895, Karl N6BVU on .895 & 146.79, 145.22 1A.

CODE 20 RADIO DIRECTORY

- State/County Public Safety 2-Way Radio Systems
- Intersystem & Tactical State-Wide Networks
- National Disaster/Distress Frequencies
- State & National 10-Codes
- Radio Band Frequency List
- Monitoring & The Law
- Channel #'s / System Uses
- State Troopers/Highway Patrol
- Civil Defense/Search & Rescue
- County Sheriffs/Fish & Game
- Turnpike Authorities
- Department of Motor Vehicles
- Forest Rangers/Indian Affairs
- Correctional Institutions
- Radar Communications
- CB Calls for State Patrols



By Nathan Young
RCMA #FL-021

NOW AVAILABLE:

•MAINE •MASSACHUSETTS
•NEW HAMPSHIRE
•NORTHEASTERN GULF COAST AREA
•RHODE ISLAND •VERMONT

EXCLUSIVE "CODED" Frequency Lists

PERSONALLY RESEARCHED AND CODED FREQUENCY LISTS FOR MONITORS OF STATE AND COUNTY PUBLIC SAFETY RADIO, INCLUDING UNIQUE CODE INDEX. THE EDITOR, NATHAN B. YOUNG, IS A FORMER TV NEWSREEL CAMERAMAN WHO HAS BEEN MONITORING PUBLIC SAFETY RADIO SINCE 1951. HE IS NOW TRAVELLING THROUGHOUT THE UNITED STATES PERSONALLY RESEARCHING AND COMPILING DATA. THESE LISTS ARE NOT FCC PRINT-OUTS. THIS NEW PUBLICATION PRESENTS CURRENT INFORMATION IN A UNIQUE FORMAT. OTHER STATES BEING PROCESSED, NEAR COMPLETION.

TO ORDER: SPECIFY MAINE, MASSACHUSETTS, NEW HAMPSHIRE, NORTHEASTERN GULF COAST AREA, RHODE ISLAND, OR VERMONT.
SEND CHECK OR MONEY ORDER PAYABLE TO "CODE 20 RADIO DIRECTORY" WITH ORDER. DIRECTORIES ARE $4.50 EACH, $5.95 FOR ANY THREE OR $10.95 FOR ALL SIX.

MAIL TO: NATHAN B. YOUNG
"CODE 20 RADIO DIRECTORY"
POST OFFICE BOX 4033
WARRINGTON, FL 32507

- paid advertisement -

SATELLITES

Bill Blomgren & John Coker, Editors

Send information about satellite frequencies which you have received with type of traffic heard, orbital data, hobby receiving equipment and antennas and questions pertaining to satellite monitoring to: Bill Blomgren, 505 E. Mulberry, #3, Normal, IL 61761.

AFSATCOM

Last month we discussed channels 1 through 10 of the Navy's Fleet Satellite Communications system known as FLTSATCOM. This month we will examine the remaining thirteen channels, 11 through 23. As you will recall from last month's article the first ten channels are assigned to the United States Navy under the system name FLTSATCOM. Channels 11 through 23 are assigned to the United States Air Force and the United States Department of Defense. These thirteen channels compose the Air Force Satellite Communications System more commonly referred to as AFSATCOM.

Multiple Satellite Operation

Unlike the FLTSATCOM system which has only four satellites, the AFSATCOM system uses many host satellites to make up its world wide network. Besides having transponders on the four FLTSATCOM satellites the AFSATCOM system is also being considered for inclusion on other Department of Defense satellites. Included in these are the Defense Satellite Communications System III (DSCS III), the NAVSTAR Global Positioning Satellite System (GPS), and the Satellite Data System Satellites (SDS). By the mid 1980's single and multiple AFSATCOM transponders could be operational on more than thirty separate satellites throughout the world.

How Are These Channels Allocated?

Channels 11 through 23 are broken down into two basic systems. The first system consists of 12 narrow band channels used for Air Force data relays. These channels 11 through 22 are 5 KHz wide and are used with computer type terminals. These terminals use a binary frequency shift keyed modulation and transmit teletype style data at about 75 bits per second (BPS). This data is always scrambled and regardless of its content is considered as high priority and top secret. As such even the most advanced listener will be unable to decode the information without the proper cipher equipment and the current day code. Voice transmissions are not broadcast on these channels and in most cases the data is transmitted in a continuous stream all day long.

The second system consists of one 500 KHz wide band channel for Department of Defense use. This wide band channel is channel 23 on the FLTSATCOM satellites. What type of transmissions occur on this channel are not known. It would seem logical, however, that they could be data, voice, or even slow scan television. If you have any information on the use of this wide band channel or the wide band channel on the MARISAT/GAPFILLER satellites (249.100 MHz) please let us know.

FLTSATCOM Channel Allocations

User	Channel	Bandwidth	Use
Navy	1	25.00 KHz	Fleet Broadcasts
Navy	2-10	25.00 KHz	Relay
Air Force	11-22	5.00 KHz	Data
DOD	23	500.00 KHz	Relay and Data

What is AFSATCOM Used For?

The AFSATCOM system is designed to provide world-wide command and control communications for all strategic forces. These forces include all airborne and ground command posts, all strategic aircraft including B52's, FB111's, and all Titan and Minuteman launch control centers. The AFSATCOM system also links the Navy's TACOMA aircraft warning and alerting systems and all nuclear weapons storage sites. AFSATCOM's twelve narrow band channels have been specifically designed for wartime operation. As such the data being transmitted is secure and voice transmission is not used. The radio monitor listener will therefore find little enjoyment in trying to monitor these twelve channels.

Satellites (continued)

Much of the AFSATCOM system is operational but it will be at least 1982 before all strategic forces have been equipped with terminals and before all transponders become operational. One network of terminals that is operational is the one used to relay presidential messages. This presidential information is sent strictly as data without voice contact. Messages are sent from both ground terminals and airborne terminals, such as those on Air Force One (AF1). These remote terminals allow the president to receive real time information on all military and government matters and gives him direct contact with the National Command Authority and the Commanders-in-Chief from virtually anywhere in the world at any time of the day or night.

Where To Look

The current AFSATCOM terminals operate in the UHF range between 225-400 MHz and generally employ FM modulation. A new family of equipment known as AFSATCOM II is now in the design phases. When completed AFSATCOM II will be operating in both the UHF (225-400 MHz) range and a split frequency range with SHF (7-8 GHz) and EHF (45 GHz) capability. Since these higher frequencies are beyond our reach we will stick to the UHF (225-400 MHz) range. Exact frequency information for the AFSATCOM channels has not been made available to us so we will only be able to offer an educated guess on where to look in the 225-400 MHz range.

Since most UHF satellite downlinks occur between 240-270 MHz we decided to examine this range for possible data transmissions. During our monitoring of this range we found a large number of channels with approximately 5 KHz spacing, transmitting continuous data. These continuous data channels were grouped together between 244 and 245 MHz. It appears that these signals are coming from the two FLTSATCOM satellites at 100°W and 23°W. If this assumption is accurate, then the range 244-245 MHz could represent the location for channels 11 through 22.

What About Channel 23?

From the monitoring reports we have received it would appear that the DOD wide band channel (channel 23 on FLTSATCOM) is located quite a ways above the 244-245 MHz range. If you examine the FLTSATCOM article from last month you will find that there is a definite gap in the frequency spacing between channels 6 and 7. This gap represents almost 7 MHz of spectrum and is the only major break between 250-270 MHz. This wide gap occurs between 258.450 MHz and 265.350 MHz. As you may recall we had received reports of both clear and secure voice transmissions at 260.375 MHz. It would therefore seem likely that this frequency range would cover the wide band DOD channel number 23.

If satellite interference is a problem as it was with the first ten channels of the FLTSATCOM satellites, then there could be at least three separate satellite frequency configurations as there were in the first ten channels. This would allow at least 36 different narrow band channels and at least three separate wide band channels. Assuming this to be correct there would have to be at least 180 KHz of spectrum space allocated for the narrow band channels and at least 1.5 MHz of spectrum space allocated for the wide band channels. It seems logical that this 1.5 MHz of spectrum could fall between 258.450 MHz and 265.350 MHz and this is where you should start to look for channel 23. Again, we would ask anyone with information on these channels to please send it in.

Summary

The AFSATCOM system like many military satellite systems will be working toward an eventual move to the SHF (7-8 GHz) or even EHF (30-45 GHz) frequency range. While this could totally eliminate low cost monitoring it is our opinion that such a move would not totally eliminate the use of the UHF (225-400 MHz) range. Too much time and money is being spent to create a workable UHF satellite system. As such, we feel that the total elimination of the UHF program would be too costly and will not occur for at least 5 years if at all. For this reason we feel that the best possibility for low cost satellite voice monitoring is through the FLTSATCOM system. We will therefore try to continue to give you as much information as we can acquire on how to monitor not only the FLTSATCOM satellites but all UHF satellites.

Appeal Response

While we did not receive a great deal of mail, what we did receive was good. It appears that there is an interest in the satellite column and so we will continue to write it for awhile longer. If any of you would like to see a specific topic covered, let us know. Many of you have expressed an interest in the amateur satellites and we will try to work up an article on them in the near future. For all of you who have written in, thank you. We appreciate your information even if we don't always use it right away. Special thanks to William Wedertz (IL-007), Dave (IL-???) from Rockford, Illinois, and John (CALA-055) for their contributions this month.

Questions From The Satellite Editors

1. Does anyone have a frequency breakdown for the AFSATCOM system?
2. Does anyone have detailed information on OSCAR 8?
3. Does anyone know if an OSCAR 9 is being planned or when it will be launched or what its frequency breakdown will be?
4. Does anyone have the frequency breakdown for LES 8 and LES 9?
5. Does anyone know the current position (degrees of longitude) for LES 8 and LES 9?
6. Does anyone have any information on a satellite system known as the MYSTIC STAR system?

If anyone can offer any information on these questions, please contact the satellite editors.

MONITORING & THE LAW

Send all articles, references, copies of monitoring laws and questions pertaining to the legal aspects of monitor radio listening to:

Due to lack of interest in my column as indicated by the lack of input to it (comments, statutory contributions and legal news items), I have elected to discontinue my column effective immediately. However, if there are strong feelings from club members about its absence, I would reconsider its reinstatement, perhaps on a bi-monthly appearance.

Editor's comment: I rather expect that most members read, enjoyed and looked forward to the Monitoring and the Law column even though they did not personally contribute to the column. I feel that the column was a very important one for our publication in view of the fact that there are monitoring laws in various states, counties and cities and there is the ever present possibility of new ones being made. It is understandable that an editor can become discouraged when he receives little input from members. Thanks, Bob, for your help with this column.

Are there any members who would like to edit the "Monitoring and the Law" column? It would be helpful to have at lease a small collection of monitoring laws on hand and the ability to furnish cleanly typewritten copy. If you are interested, please contact me: RCMA, P.O. Box 4693, Riverside, CA 92514 IBR

photo department

Send photographs of custom monitor listening posts, unusual or extensive monitor or two-way antenna systems, user station consoles (PD, Fire, Paramedics, etc.) or other monitor/two-way related equipment of interest. Photographs must be 3 x 5 inches or larger, black-and-white with good contrast, sharply focused and attractively composed. Each photo must be accompanied by details and explanations of equipment. Photos will not be returned. If you have questions, write first and please include an SASE.

Greetings and now that it's Spring, our members have used up that roll of film from Christmas and are taking those black & white photos of their stations! This month's contribution features Kurt Swaney, KS 006, at his monitoring station.

Beginning from the left on the top shelf are notebooks full of frequency and radio information. Next is a cassette tape storage box containing radio tapes, and a Panasonic RF-1150 tunable radio- Kurt's first monitor. On the right- the most important item- a selection of RCMA Newsletters, and a Realistic Pro 20 pocket scanner. On the center shelf from the left are a digital clock, a timer used to control the Regency ACTR-106, a Descrambler mounted atop the Regency, a Bearcat 220, a Bearcat 210, and a Panasonic Cassette Recorder. On the bottom shelf at left is a Bearcat Weather Alert. Kurt's monitors can be connected to any of six attic mounted antennas. On the right, of course, is Kurt.

Now let's hear from you. Don't forget- they need not be photos of your station. We're also looking for good photos of dispatch consoles, antenna arrays, unusual mobile installations, group photos taken at 'RCMA Gatherings', and more. Remember to pack them between cardboard, mark the envelope "Photos, Do Not Bend", and include a full description of what you photographed. See you next month with another exciting photo!

Railroads

Ken Fitzgerald, Editor

Send information about railroad frequencies and their uses, radio system details, tips for monitoring railroads, explanations of railroad jargon and related information and questions to: Ken Fitzgerald, P.O. Box 307, Springer, OK 73458.

I mentioned in the January column I was still doing research on one Chicago, Rock Island & Pacific frequency, but now I have come up with three to pass along. Their continued validity is doubtful due to the fact the Rock Island has been ordered to cease operations on March 2nd due to a lengthy combination of financial and physical problems, but I wanted to pass them along anyway in the interest of completeness. As I write this column on February 14th, several other railroads have expressed their interest in purchasing segments of the Rock Island, and as a result it is difficult for me to predict how this will effect the usage of the frequencies assigned to the Rock Island. The first frequency, 160.755, should be added to the Oklahoma list from January, and is used for communication between handie-talkies in the freight car paint shop in El Reno. The second channel, 161.220, should be added to the Dallas/Fort Worth list in the February/March issue, and is used in a pair of handie-talkies assigned to a mobile wrecking crane based in Fort Worth for coordination between the crane operator and his ground man. The third frequency, 160.320(same as Katy channel #2 in this region), is used by some officials of the maintenance of way department for mobile to mobile communication over the whole railroad, and should be added to both lists.

Now that I am beginning to gain some experience in the management of this column, several matters have come to my attention that I want to discuss before continuing with more railroad definitions. Several of the contributions I have received so far have been partially composed of material derived from lists of railroad frequencies put out by other people, publications, organizations, and businesses. While I have nothing against this(some of the material is very good while a great deal is totally wrong or misleading), I want to ask everyone to please quote the source of any frequency or list of frequencies you send in if the information is not a result of your own personal research. Some of the material that has been derived from other sources I have been able to spot myself, while still more has been pointed out to me later by other members. I have even received some of my own research back from lists I handed out before becoming a RCMA member!

Some confusion might arise over the proper crediting of contributions, because unlike police and fire frequency assignments which vary from town to town, the same frequencies are used by each railroad company for primary operations over its entire system(for example Southern Pacific/Cotton Belt channel #1, 161.550, is used as the road channel over the whole railroad from Portland down through Los Angeles and eastward to New Orleans and St. Louis). As a consequence, I get many contributions from members in areas hundreds of miles apart that consist of almost exactly the same channels for a given railroad. The best solution I can come up with is to combine all the contributions for a certain railroad into one list of frequencies with everyone's name and number at the top to try to keep from being too repetitive. If anyone is unhappy with this method, I am open to criticism and suggestions.

I made a very brief reference at the end of last month's column about repeaters. Their use by railroads is usually limited to large yards and mobile telephones, and it is easy to confuse them sometimes with control link frequencies, which are used to connect a base station with a remote antenna site which then transmits and receives on a different frequency, for example the railroad's road channel. Many times if you are within receiving range of a remote antenna which is using a link frequency to relay conversations on the road channel back and forth to a distant base station, you will be able to "leech"

off that antenna and be able to monitor a train's radio chatter at a much greater distance than you would be able to by just monitoring the road channel. The control links listed for the Western Pacific later in this column are excellent examples for those of you who are in a position to listen in on them. If you suspect a certain frequency of being a true repeater output, I would appreciate your indicating this in your contributions, and also tracking down the input frequency if you are able. Generally(but not without exceptions), if the repeater output is in the range of 160.215 to 160.995, then the input will be between 161.010 and 161.565; and vice versa. For example, the car department repeater in the Santa Fe yard at Barstow, California outputs on 160.440, while the input frequency is 161.565.

When contacting me for information on the channels used in your area, it would be helpful to me to indicate whether you have a programmable or a crystal scanner, so I will be extra-careful when stating which frequencies are positively confirmed and which are educated guesses, in case you are intending to buy any crystals on the basis of my information. Last but not least, I personally prefer to organize the frequency lists made from my own records or from contributions in the format of listing them first by railroad, and then in the actual order in which they are installed in the channel 1, 2, 3, 4, etc. slots of the radios used by that railroad(although many times I don't know the order, or it will vary as to what department a radio is assigned to). I like this better than the method of just lumping everything for a certain region or state together in ascending order of frequency, which I feel makes it more time consuming to pull out the channels used by any one railroad. If I am going to listen to the Kansas City Southern, then I just go to that grouping on my Oklahoma list; or if a Katy special agent(railroad detective) says, "Go to channel 3!", then I want to be able to follow him without sifting through the whole list of frequencies to find Katy channel 3. If you are able to assign channel numbers to each frequency for a railroad in your contributions, then please do. Once again, if anyone doesn't like to see me alter the content of their contributions to fit the above format considerations, then please let me know.

Now, if everyone is still with me and still awake after all of that long-winded speech, here are this month's contributions:

From MIKE(LA-008), WESTERN PACIFIC RR:

Systemwide Channels:

Channel 1(Dispatcher channel):
- Dispatcher to train ---------- 160.380 (duplex)
- Train to dispatcher ---------- 160.260 (duplex)

Channel 2(Road channel) ---------- 160.380 (simplex)

Mobile unit access to company telephone system at San Francisco, Sacremento, Keddie, CA, and other areas- 161.280/160.785

Control Link Frequencies:

Control link from Sacremento to Jarbo Gap(relays conversations on channel 1 back to Sacremento, and responses from Sacremento back to antenna site)------ 161.460

Control link from Claremont Mountain to Big Valley Mountain(same type operation as above) ---------- 161.475

Other California Channels:

Special agents ---------- 160.275
Mechanical department ---------- 160.605
Industrial clerks ---------- 160.620
Switch engines ---------- 160.530
161.115
161.460

In yards, coordinated with use by Tidewater Southern Railroad ---------- 160.230/160.920
160.830

In yards, coordinated with use by Sacremento Northern Railroad ---------- 160.680
160.770

Railroads (continued)

(Ed. note: MIKE says there is some controversy about the use of 160.620 by industrial clerks, and any info on this or any of the other California channels would be appreciated)

From another MIKE(NY-058), LONG ISLAND RR:

Channel 1(Tower to train) ---------- 160.380
Channel 2(Train to movement bureau, which is identified as "204") ---------- 161.445
Channel 3(Yard channel) ---------- 161.265
Channel 4(Maintenance of equipment) ---------- 161.535
Special agents channel 1(Base to cars) ---------- 160.455
Special agents channel 2(Car to car) ---------- 160.605
Maintenance of way channel 1 ---------- 160.725
Maintenance of way channel 2 ---------- 160.395
Signals, communications, & power maintainers channel 1 - 161.385
Signals, communications, & power maintainers channel 2 - 160.785

160.395 and 160.785 are rarely used.
Channel 4 is sometimes used for banter between trains.
None of these frequencies have repeaters, but 160.455, 161.385, 160.725, and 161.445 have transmitters in different locations.

(Ed. note: Thanks MIKE for a really great contribution, illustrating many of the points I discussed earlier)

From Paul(MA-010) and WALLY(NY-024), BOSTON & MAINE RR:

Dispatcher channel:
Dispatcher to train ---------- 161.160
Train to dispatcher ---------- 161.520
Yard channel ---------- 161.400
MBTA commuter trains north of Boston on B&M trackage --- 161.310
Special agents ---------- 161.250
Car inspectors in East Deerfield, MA yard ---------- 160.230/?
East end & hump switchers, East Deerfield yard ---------- 160.350
Maintenance of way ---------- 161.370

(Ed. note: I am presently(some would say always) confused on the note of whether the B&M uses 161.520 in a simplex mode as its road channel in addition to the duplex dispatcher channel, or whether the duplex dispatcher channel is the full time road channel, with the 161.400 yard channel being channel #2. Can anyone out there shed some light on this?)

That's all for this month, and I've decided the next column in May will be on the subject of railroad mobile telephones, with detailed and complete information on the systems used by the Santa Fe, Southern Pacific, and Union Pacific. For those of you who read last month's column closely, yes, I do intend to eventually explain "what is a train?" In the meantime, keep those contributions and questions coming!

CANADA

Send Canadian frequency information, radio system details and other information relating to Canadian monitor radio listening and questions to: Rory B. McEvoy, 12 Castlegrove Blvd., Unit 9, Don Mills, Ontario, M3A 1K8; (416) 449-4170 weekends and 7-11 PM EST/EDT weekdays ex THURS.

Rory reports that he has been ill but wishes to continue his editorship. We hope Rory is feeling better and we will be looking forward to his next column. IBR

Business, Etc.

Chuck Gysi, Editor

This column is for reporting frequency and radio system information for the following varied services: business, forest products, petroleum industry, special industrial, manufacturers, news media (behind-the-scenes radio, TV & newspaper), motion picture industry, security (private patrol, detective agencies, campus security & police, amusement park & stadium security, shopping center & mall security, plant/business/ hotel security, etc.), General Mobile Radio Service (GMRS), mobile phone/RCC & paging, trucking firms, bus lines, taxi cabs, tow trucks, utility companies (private & municipal water, power, electric, gas, telephone, etc.), and all school & college related frequencies. Send information and questions pertaining to the radio services covered in this column to: Chuck Gysi, P.O. Box 216, Willow Grove, PA 19090.

Well, here I go again to give the manufacturers another lashing on the lack of 800-MHz gear. Public safety agencies are switching over to the 800-MHz band on a daily basis. All one has to do is take a look at the recent FCC microfiche files and this is evident. Just a few examples for what it's worth: Berkley Township fire department in Bayville, NJ is now licensed on 852.2875 as WXE 798. The Los Angeles City School District is licensed on 853.4125 with transmitter sites at Mt. Sierra, Mt. Lukens and Mt. Disappointment. The city of Trenton, NJ holds a local government license for water operations as WYH 514 on 853.9375 and 854.2625. Essex County in Verona, NJ is authorized for 854.2875 under WYH 524 for its hospital center. Also, the Southern California Rapid Transit District (RTD) holds licenses for 854.7625 as WYA 662, Los Angeles, and WYA 663, Beverly Hills. It all goes to show that the Chicago Fire Department isn't the only governmental unit to switch to 800 MHz. There's more than just business activity on 800 MHz these days and there's a lot more local governments making the switch. When will the manufacturers of monitoring gear wake up? If you would like to see 800 MHz gear become available, write to the manufacturers and let them know you want it.

News Media/Film

SHADOW TRAFFIC-CHICAGO CRACKED

Through the help of Mike (IL-014) and John (IL-012), we have cracked the frequency for the Shadow Traffic Network in Chicago. They are operating on 462.55 under call sign KAC 4321. Knowing that Shadow was operating on 462.55 in Philadelphia and New York City, I had Mike check out 462.55 in the Windy City, and we lucked out and found them there also. Mike has sent me a tape of their operations there and they seem to function similar to the setup here in the east. The helicopter in Chicago IDs as "Helicopter 144" and other mobiles use 200-series numbers. The control center IDs as "base" or "Shadow base" occasionally. For what it's worth, Shadow used to operate on 151.715 in Philadelphia, according to FCC files.

TOPEKA AND KANSAS CITY AREA NEWS MEDIA

From Kurt (KS-006)

151.715	KVE 552	Lawrence (KS) Daily Journal World photographers
152.990		KANU-FM Lawrence F-1
	KAF 630	KPRS-FM Kansas City
153.050	KAO 280	KTOP and KDVV-FM Topeka
153.170		KANU-FM Lawrence F-2
153.350	KAM 421	KLWN-AM and KLZR-FM Lawrence
161.640	KAL 653	WIBW-TV Ch. 13, WIBW-AM&FM Topeka
161.670		KMBZ-AM Kansas City
161.700	KJM 552	KMBC-TV Ch. 9 Kansas City
161.730	KJR 570	KTSB-TV Ch. 27 Topeka
161.760	KAI 911	KCMO-TV Ch. 5 Kansas City (also KZH 879) main, cues
166.250	EBS Stations	
	KUI 283	KTOP and KDVV Topeka
	KAF 630	KPRS Kansas City
	KAL 653	WIBW-TV and radio Topeka
	KEX 976	WDAF-TV and radio Kansas City (also KEX 977-9)
170.150	KAI 911	KCMO-TV Ch. 5 and KCMO-AM (also KZH 879) TV F-2
	KAK 548	WREN-AM Topeka
173.225	KAM 222	Kansas City Star and Times
173.275	KAM 222	Kansas City Star and Times

Business, Etc. (continued)

173.325 KBM 466 Topeka Capital Journal
450.050 KXF 978 WDAF-TV Ch. 4 Kansas City remote cues R
450.1875 KEH 381 KMBC-TV Ch. 9 Kansas City remote cues R
450.0875 WDAF-AM Kansas City news and helicopter

MILWAUKEE NEWS MEDIA FREQUENCIES and FILMING "1941"
From Tom (WI-006)

161.640 WTMJ Radio traffic airplane
161.700 WOKY Radio news
161.730 WTMJ Radio and TV production and engineering
166.250 WITI-TV news cars
170.150 WISN-TV and radio news cars
173.275 Milwaukee Journal picture desk
450.1125 WTMJ-TV F-1 remote broadcasts R
450.1875 WTMJ-TV F-3 news R
450.2125 WTMJ-TV F-5 transmitter R
450.3125 WISN-TV ENG van
450.5500 WITI-TV ENG van
450.5875 WMVS and WMVT-TV base
455.5875 WMVS and WMVT-TV mobiles

——The following frequencies were used by Universal Studios during the last week of August 1979 while they were filming the movie "1941."

173.225 F-3 usage unknown 173.325 F-4 usage unknown
173.275 F-2 transportation 173.375 F-1 production

F-3 and F-4 were not used enough to establish their usage.

UPDATE TO UNANSWERED QUESTIONS

From RICH (PA-027): Some additional Pittsburgh news media freqs
455.350 WIIC-TV (NBC)
455.150 WIIC-TV (NBC)
455.250 KDKA-TV (CBS)
450.650 Used by NBC during Houston-Steelers game for remote broadcast
450.2875 KQV News Radio (remote sports broadcasts)

From JOE (MD-015): More Baltimore news media frequencies
450.0875 WBAL-TV Ch. 11 (NBC)
450.3875 WJZ-TV Ch. 13 (ABC-Westinghouse)
161.730 WFBR radio

From MATT (PA-016): ARCO Go-Patrol codes in Philadelphia
Code Robbin--relates to Robbins Avenue which leads to Tacony-Palmyra bridge. Refers to Tacony-Palmyra bridge opening.
Code ARCO--refers to Burlington-Bristol Bridge opening.

GMRS

C'mon folks. You slipped up this month. What's going on the General Mobile Radio Service in your area? This is one of the few services, other than CB, that organizations can set up systems. Are there any special uses of GMRS by particular associations that you know of? If so, send it on in!

Business

UNION OIL OF SOUTHERN CALIFORNIA SAN PEDRO REFINERY
From Dewey (CA-LA-217):

48.74 Emergency only ——— 153.14 Maintenance, telephone page
The following frequencies are used for field operations. All are low-power repeaters (5 watts). HT-220s are used and the input freqs are all 3 MHz higher than the output freq. All freqs are active.
466.1625 466.1875 466.2125 466.2375 466.2625
466.2875 466.3125 466.3375 466.3625 466.3875
Note: Other oil companies across the country use these same freqs i.e. Exxon, Standard, etc. for similar operations.

From SCOTT (GA-005): Beaver of Atlanta is on 800 MHz. They sell and service high-pressure washers. A sales supervisor told me that they "were used as guinea pigs and have had nothing but trouble" with the radios.

Motor Carrier

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT RADIO SYSTEM
From George (CA-OR-119):

All RTD buses are almost equipped with 10-channel GE radios now. The radios originally were equipped with eight channels, but channels 9 and 10 are now being added. Incorporated into the radio is a silent alarm system which the bus driver can activate by tripping a concealed switch when it might be unsafe to use the two-way radio. Supervisors, road mechanics, special agents and high officials use other channels, usually channel A and E. A bus is called by his line and run number usually although sometimes it is called by bus number or employee badge number. Supervisors ID as D (for districts) followed by a number. Dispatchers are RR (radio room). Road mechanics ID with an M and agents ID with an A

Ch. 1	472.5375	Ch. 6	472.6875	Ch. A	453.475
Ch. 2	472.6375	Ch. 7	472.7125	Ch. E	453.325
Ch. 3	472.5625	Ch. 8	472.6125	?	453.275
Ch. 4	472.6625	Ch. 9	471.2625	?	453.625
Ch. 5	472.5875	Ch. 10	471.3375	?	43.78

Emergency codes:
Code 1--General Alert (used by radio dispatcher only)
Code 2--Serious accident. Police and ambulance needed.
Code 3--Crime emergency (to be transmitted only after danger passed)
Code 4--Emergency on bus (other than crime emergency)
Code 5--Community Emergency (district not involved, for fires, accidents)

Opening, Closing and General Codes
10-12 I have a message
10-13 Repeat your last transmission
10-14 Go ahead with your message
10-15 Message acknowledged. End of message
10-17 What is your location?
10-18 Call radio dispatcher by telephone
10-19 Request for time check

Mechanical Codes
10-21 Farebox problem
10-22 Equipment problem (describe briefly)
10-29 Radio problem

Service and Routing Codes
10-31 Blockade or unusual condition
10-32 Fire or fire equipment blocking street
10-33 Bus involved in minor accident (no police or ambulance needed)
10-37 Blockade or unusual condition now clear

Schedule Code
10-41 Operating more than 10 minutes late

Miscellaneous Codes
10-52 Lost passenger
10-53 Missile has struck bus
10-54 Sick passenger
10-55 Sick operator
10-390 Intoxicated passenger

Mobile Phone/RCC

From MIKE (GA-004): Mobile phones in Atlanta are used by Atlanta police SWAT team. Also, I have heard Secret Service agents using high-band mobile phones while President Carter was in town. Others using mobile phones are a security company with guards all over Atlanta and MARTA rapid transit.

Utility

PART II--L.A. CITY WATER AND POWER SYSTEM
Orange and White/Orange systems

The Orange system (48.52) is designed to provide communications in the Antelope Valley and South Owens Valley area. For normal oper-

ating distances, mobile units and base stations transmit and receive on the Orange frequency. When greater range is needed, radios capable of transmitting on the White frequency (47.80) may use that frequency to access a mobile relay transmitter located on Randsburg Peak. The Randsburg Peak mobile relay transmitter retransmits received signals on the Orange frequency.

Facilities guarding the Orange and Orange/White systems include Haiwee power plant, Castaic power plant, power plant #1, power plant #2, Dry Canyon Reservoir and Mojave district headquarters. With the exception of Dry Canyon, Power Plant #2 and Castaic power plant, all these facilities have capabilities of transmitting on the white frequency.

Mobile units transmitting on the white frequency must transmit the FCC call sign KA 4305 when clearing the frequency. Base station facilities must transmit their assigned call sign after each series of transmissions when operating on the Orange or White/Orange system.

From JERRY (OH-015): Licking Rural Electric in Licking County, Ohio, Coshocton and part of Knox County, operates on 37.54 under call sign KQA 395 for line repair, testing power outputs between substations and mobiles.

Security

WALT DISNEY WORLD RADIO SYSTEMS

From Jorge (FL-0??):

——— The following frequencies are in use by emergency units and several portable maintenance units. IDs are i.e. car 1, engine 1, woods 1, rescue 1, portable 1, ambulance 1, central first aid portable 1, etc.

453.825	Base	KRT 729
458.825	input to 453.825	

——— The following frequencies are used by Magic Kingdom maintenance.

462.650	units ID such as Adventureland 1, etc.
462.675	KAA 8101

——— The following frequencies are used to coordinate transportation.

462.625	Trams (parking, Magic Kingdom, Fort Wilderness)
461.600	Transportation (boats, etc.)
467.575	Monorail system (ID by color) KAA 8107

——— Security uses the following frequency.

464.400	Security

There are probably many more frequencies in use at Disney World, however it is not possible to search the entire range while on vacation.

From SCOTT (GA-005): I just returned from a vacation in Disney World in Florida. Security is on 800 MHz.

CASINO LISTS NOW AVAILABLE

Two members have compiled a list of casino and other related frequencies for Las Vegas, Reno and Lake Tahoe. These lists were compiled from FCC files and list casinos, hotels, bail services, etc. However, the lists are too extensive for me to publish here because of space limitations on the newsletter. I do want to make this information available to other members though. If you would like to receive a copy of this information, please send me a SASE (self-addressed, stamped envelope) and two mint stamps to cover photocopy costs. Please send your requests before May 1 and allow sufficient time for processing (I do get busy).

School

MIT UPDATE

From Bob (MA-011):

I would like to add to and clarify the information given by Bob (MA-020) in the January newsletter on the Massachusetts Institute of Technology in Cambridge, MA.

Business, Etc. (continued)
461.575 Campus police
461.250 Physical plant two-way radio
462.775 Physical plant tone paging channel
—Physical Plant codes
Code 1 Call your office
Code 2 Call the Control Center
Code 3 Stand by for a message
Code 99 Emergency

SOME ILLINOIS SCHOOL SYSTEMS
From Ken (IL-0??):

In Illinois, all public universities and junior colleges use the frequency of 453.90 for police and 453.60 for public works. This only varies in the Chicago area where some university police departments are included in area-wide dispatch.
—Southern Illinois University, Carbondale
453.900 Police
453.600 Public Works
151.775 University paging KGY 749
35.90 Student Center paging KTG 381
—Wheaton College, Wheaton
151.685 KGI 919
—Northern Illinois University, DeKalb
453.900 Police
461.175 KRA 622
—College of DuPage, Glen Ellyn
453.900 Police
464.675 KSM 440
—Cook County School Board, Chicago
462.000 KJV 627

From ERIC (CA-LA-216): For the past few months, I have been searching for the frequencies used by the University of Southern California (that's USC, not UCLA), but to no avail. I am specifically interested in learning the frequencies the school uses for its security operations as well as those used by physical plant.

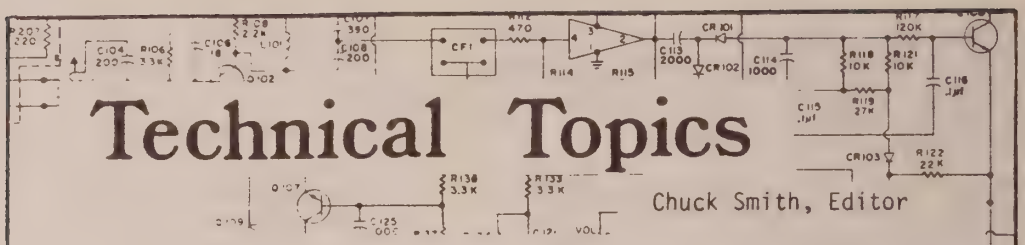
Freak Freqs

AUTO-RACING FREQUENCIES
From Karl (CA-OR-022):

151.625 KN 3318 National Hot Rod Association, nationwide use
154.540 KGX 860 Riverside International Raceway, Riverside, CA
154.570 KN 4446 Ontario Motor Speedway, Ontario, CA

From CHUCK (PA-005):
151.835 KZR 816 Reading Stock Cars, Reading, PA
464.550 KO 6337 All American Racers Inc. of Santa Ana, CA nationwide use
(Editor's note: Many professional race car drivers use two-way radios between their car and pit crews during races. Some use CB radios, but others utilize business band equipment, most likely licensed to the business that the driver owns. Does anybody have any of these frequencies to share?)

From CHUCK (PA-005): An additional freq to add to last month's major league sports list:
464.550 KOL 479 Dallas Tornado Soccer Club Inc. nationwide use
——Also, here are some off-beat New York City frequencies:
151.895 KJG 840 Metropolitan Opera House
KWP 828 Forest Hills Central Radio Patrol
151.655 KZD 762 ASPCA, Brooklyn (very strong base)
various Central Queens Citizens Radio Patrol Inc.
154.540 KBS 260 Rockefeller Center
464.350 KKD 785 New York Stock Exchange
464.425 WXK 400 Metropolitan Museum of Art
——And last, but not least, here's what may be an interesting one:
464.425 KKM 498 Campus Escort Service, College Park, MD



Technical Topics

Chuck Smith, Editor

Send all equipment reviews, technical articles, technical tips and questions on such subjects as receivers, antennas, preamps, accessory equipment, repeaters, links, tones, scramblers, non-voice data transmissions or even computer applications for monitoring to: Chuck Smith, 4901 Heil Ave., #3C, Huntington Beach, CA 92649.

Even as I write this, Southern California is being battered by one of the worst winter storms in recent history. 24-hour rainfalls in excess of 3 inches are being reported in some areas, and flooding is widespread as a result of the summer fires which burned off much of the watershed on the slopes of the canyon areas. Public safety agencies have been called upon to provide emergency services, and many communications networks not normally used in calmer times have seen a lot of activity.

Specifically here in Orange County, the town of Laguna Beach has been hard hit, with water standing six feet deep in some homes while a virtual wall of oozing mud and rocks threatens to push still others off their foundations.

For those of you who are not familiar with this part of the state, it should be mentioned that much of Laguna Beach is hilly, with some areas buried deep within narrow canyons which wind through the foothills. For this reason, many of the areas of Laguna Beach are not accessible to radio signals, at least those originating from the central areas of the county where most of the service agencies are located. For Red Cross volunteers in the area helping to relocate those residents who had been forced to flee their homes, this became a real problem. The conventional Red Cross radio network, operating on 47.42 MHz in the low band, was completely ineffective in putting usable signals into the disaster area, while the already busy police frequencies could not efficiently handle the extra traffic load. It might have been a sticky situation if it had not been for the amateur radio operators in the area, and the local RACES repeater, W6KRW/R. There is a repeater in the Laguna Beach area, but for some reason it was off the air during the worst part of the storm, and while attempting to find another repeater which had adequate coverage into the affected area, it was found that W6KRW/R was just the machine for the job. Located in the hills east of the city of Orange, its coverage pattern extended deep into the canyon area through which Laguna Canyon Road wound its way.

There were too many contributors to the effort to mention, but K6WS, WA6JTZ, and W6RE were among the cornerstones. This may not seem like a relevent technical topic, but for those people who were directly affected I can assure you that it was important nonetheless, and at any rate it's a good example of how an area's communications resources can be mobilized in an emergency to meet the needs of the community.

CONTROL TONES AND SYSTEMS

It's been a long time since I did much operating on two meters, but ever since Christmas when I received a new synthesized handie-talkie, I've found my interest greatly rekindled. (The activity I mentioned above, by the way, occurred on two meters. W6KRW/R is a two-meter repeater operating with an input frequency of 146.295 MHz and an output frequency of 146.895 MHz. Sorry I forgot to mention that.)

Anyway, the revived interest in two meters and some of the systems that can be found there prompted me to go back and do some more experimenting with control tones and control systems, and I thought it might be interesting to some of you to have a little information about these systems, since the same techniques are used to a large extent on many of the commercial radio systems.

I've had a whole lot of inquiries about CTCSS systems over the past couple of months, so perhaps the interests of a discussion would be best served by starting there. The CTCSS (Continuous Tone Controlled Squelch

System) is known by several other generic terms, of which Motorola's "PL" or "Private Line" is the best known. General Electric has the same system under the name "Channel Guard", while RCA calls it "Quiet Channel Squelch". Call it what you will, but it all amounts to the same system, which uses a low-frequency tone transmitted along with the normal voice traffic, to access and activate equipment associated with a given radio system or network. The primary application is to prevent systems which share the same frequency from interfering with one another, although it can be used as a simple form of system security.

There are 32 commonly used tones, each referred to by an alphanumeric designator. Following is a list of these tones:

67.0	XZ	91.5	ZZ	118.8	2B	156.7	5A
71.9	XA	94.8	ZA	123.0	3Z	162.2	5B
74.4	WA	97.4	ZB	127.3	3A	167.9	6Z
77.0	XB	100.0	1Z	131.8	3B	173.8	6A
79.7	SP	103.5	1A	136.5	4Z	179.9	6B
82.5	YZ	107.2	1B	141.3	4A	186.2	7Z
85.4	YA	110.9	2Z	146.2	4B	192.8	7A
88.5	YB	114.8	2A	151.4	5Z	203.5	M1

Although this is not a 100% complete list, almost all of the tones used is CTCSS systems today will be taken from this list. The frequencies are in hertz, of course, and since they are quite close to one another, the decoder should be quite sharp in order to avoid detecting another tone instead.

If you are interested in adding a CTCSS decoder to your receiver, there is a company here in the Southern California area that makes the answer to your problem. The unit is known as the TS-32, and is manufactured and sold by Communications Specialists, 426 West Taft Avenue, Orange, CA 92667. The telephone number is (714) 998-3021, or for those of you not in California, you can call toll free at (800) 854-0547. The TS-32 is both an encoder and decoder, and by the use of a 5-switch DIP package can be programmed for any of the 32 tones listed in the chart above. The unit is small (1.25"x2.0"x.4") and can be added to any receiver quite easily. While I am not in the habit of specifically endorsing products, this one is too good to pass up for those interested in CTCSS.

In some systems, the standard Touch-Tone scheme is still used, and with good results. This system is familiar to almost everyone since it is used for telephone signalling, and relies on the transmission of two tones simultaneously to indicate which key on the telephone dial has been depressed. The telephone keypad is arranged in a matrix of four rows and either three or four columns. Each row or column has its own associated frequency, and when a key is pressed the frequencies for that column and row are transmitted together. Below is an illustration of this matrix:

	1209	1336	1477	1633
697	1	2	3	A
770	4	5	6	B
852	7	8	9	C
941	*	0	#	D

For example, when you press the "5" key, you actuate the oscillators for 770 Hz in the low group and 1336 Hz in the high group, and both of these tones are transmitted. The high-group tone (that group designated for the columns) is normally transmitted at a level about 6 db above that for the low-group to compensate for the roll-off effect of long telephone lines.

Touch-tone signalling is not normally used for the same purposes as the CTCSS system because the tones occupy the same portion of the frequency spectrum as that of the human voice, and therefore is subject to being interfered with by speech traffic. However, it is widely used for remote control purposes and other such signalling applications. Touch-tone encoders are also available from Communications Specialists at the previously mentioned address. Touch-tone decoding, however, is necessarily a more complex issue, since it involves the decoding of two distinct tones and the logic necessary to subsequently decode the matrix shown above. However, a

TECHNICAL TOPICS (Cont.)

good unit can be home-built for less than $75 in parts if the desire is there. One application I have for this technology is remote control of a programmable scanner via the telephone lines, and in fact I am considering including such a unit in my remote base system which will be mounted on a peak over a mile above sea level! In this way via the telephone line (or an accessory radio link) I would be able to program the scanner to receive any desired frequency. There really are many more applications for remote control systems than I have room to discuss in this column, and rather than try to discuss the entire subject I would rather stimulate specific questions from you members.

In the meantime I recommend the following article on the general subject of tone control: "The World of Tone Control", by J. H. Everhart K3JE/2 March 1978 issue of 73 Magazine, pp 82. This article is an excellent introduction to the various aspects of tone control, specifically as it applies to the amateur radio user; however, the principles are universal in their appeal.

AMATEUR RADIO MEMBERS

It seems that many of the RCMA members here in the local area have recently obtained their amateur radio licenses and are ready to expand their horizons in that direction. Since I am also interested in this I would enjoy hearing from other RCMA members who are also radio amateurs and want to share their interests and experiences in this area. KARL (CA-OR-22) wrote a few issues ago about an RCMA net here on two-meters, and perhaps if the number of ham members keeps increasing there may be enough to resurrect this idea.

Well, my mailbox was a little bit short on material this month, and since I went a little overboard and exceeded my limitation last month I'm going to close a little early this time. Hopefully I've stirred a few imaginations with this month's topic and perhaps a more comprehensive article may be generated in the future. For now, good luck and good listening!!

- paid advertisement -

SCANNING FOR ACTION.

Listen to Exciting POLICE and FIRE ACTION! HIGHWAY PATROL, BUSINESS, FORESTRY, HAMS and AIRCRAFT with BEARCAT® 250, 220, 211, 210 Four Six and Thinscan . . .

Bearcat® 250

Bearcat® 220

Send for FREE BROCHURE to:

code-7 electronics
Dept. R
P.O. Box 1505
Modesto, Ca. 95353

Bearcat® Four-Six

(209) 527-2443

Bearcat Dealer

J. ZUCHELLI
Member RCMA

Beginners ?????? Corner

Have a question? If you are a new scanner listener and don't understand something about monitoring that most everyone else seems to understand, send in your question. When possible, your question and the answer will be printed. No answers will be sent by return mail. Your name will not be printed. Write to: David E. Crowley, 7234 Balson Ave., University City, MO 63130.

Q. Is there an all-band scanner antenna that is also directional? I live 30 miles from a major source of signals in the 30-50, 150 -174 and 450-512 MHz bands, and would like to listen to these without interference from other directions.

A. Bob Grove, RCMA's Military and Government editor has converted a TV antenna for just this purpose. See his article the August 1979 issue of Polular Electronics for full details. According to the article you need a Radio Shack VU-90 Color Supreme II antenna (15-1642, $32.97), a rotator (Radio Shack Archerotor, 15-1224, $59.95) and a 300 - 75 ohm balun (Radio Shack 15-1140, $2.79) A balun is a "balanced-to-unbalanced"transformer which is attached between the antenna and the cable leading to your receiver. Once you've read Bob's article and understand the principles, you may substitute other makes for Radio Shack. For cable use foam-dielectric RG 58 (50 ohms) or RG 59 (75 oms) coaxial transmission line if your run is less than 50 feet; if longer use RG 8. RG stands for "radio guide." At 50 feet the transmission loss is about 4 dB (37%) for RG 58 and 59 and only 1.3 dB (14%) for RG 8. The modified antenna is mounted with the elements oriented vertically on 3 feet of non-conducting PVC pipe which is attched to the rotor, which, in turn, is fastened to a metal mast. Again according to Bob's article, this directional beam works considerably better than an omni-directional Hustler "Discone", especially on UHF. CAUTION 1: FOLLOW ALL DIRECTIONS IN BOB'S ARTICLE CAREFULLY. CAUTION 2: FOLLOW ALL INSTRUCTIONS FOR THE ANTENNA AND ROTOR FAITHFULLY. CAUTION 3: ANTENNAS AND ELECTRIC POWER LINES ARE A DANGEROUS, AND POSSIBLY FATAL, COMBINATION.

Q. I have six scanners which interfere with each other and with the TV. How can I cure this problem?

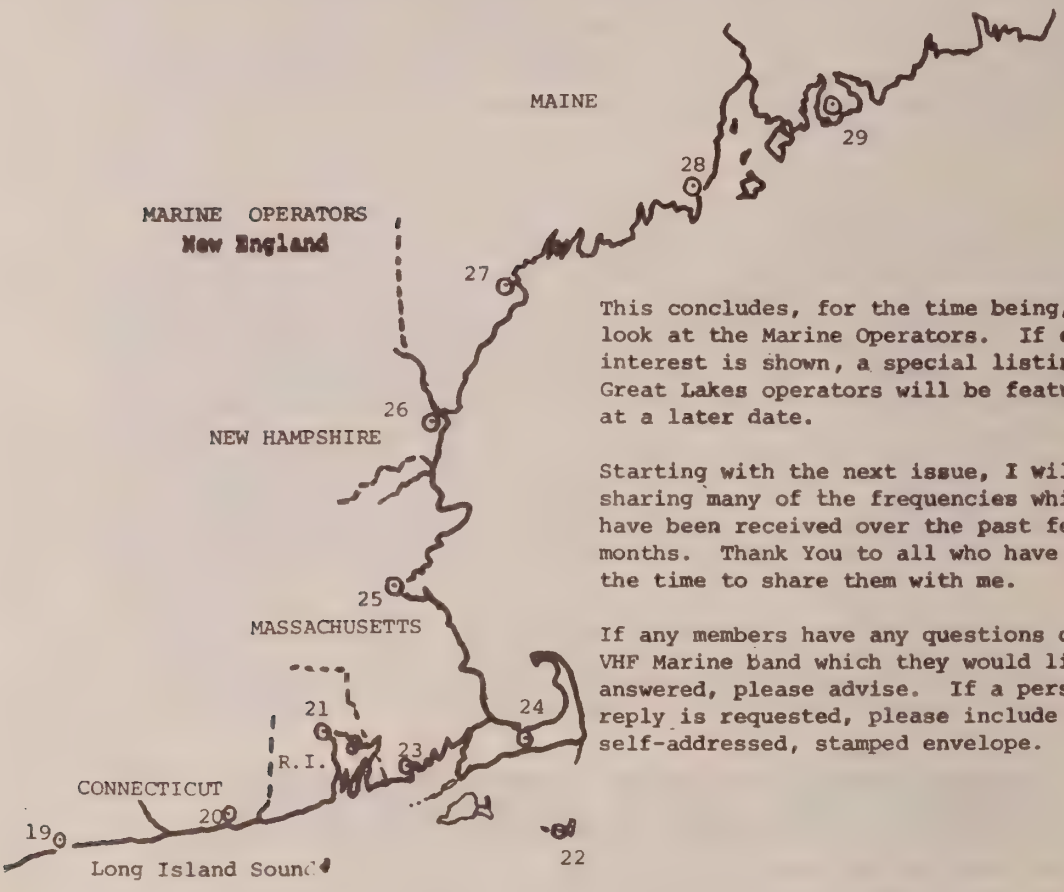
A. There is no one solution for this problem, but a couple of suggestions. 1) Use separate antennas, widely spaced on the roof and away from the TV antenna. Put the most active frequencies into three of your scanners, one for VHF Low, one for VHF High and one for UHF. The less active frequencies go into the remaining scanners. 2) An ingenious idea, thanks to Mike Redman. Place the strong local frequencies in a scanner with a different I.F. (intermediate frequency) from that used by the others. That is, if you have four Regency and two Bearcat crystal scanners, the strong local frequencies go in one the Bearcats with an I.F. of 10.8 MHz, and the remainder in the Regencies with I.F. at 10.7 MHz. 3) Place the weak, distant frequencies in a scanner connected to a directional beam antenna. Solving this kind of interference problem will take some experimentation. However, putting some of your scanners on outside antennas should help. Readers, any other ideas???

Beginners tip for the month: Another publication: Communications Monitoring: A Listener's Guide with Receiver Enhancing and Money Saving Projects, by Robert B. Grove. Hayden Book Company, Inc., 50 Essex St., Rochelle Park, NJ 07662, $5.45. The project section alone should make this book a valuable addition to your collection.

VHF Marine

Rod O'Connor, Editor

Send information, articles, frequencies and how they are used and questions that relate to private, commercial and Coast Guard VHF maritime and inland waterways radio communications to: Rod O'Connor, USCG Group, 259 High St., South Portland, Maine 04106.



This concludes, for the time being, our look at the Marine Operators. If enough interest is shown, a special listing of Great Lakes operators will be featured at a later date.

Starting with the next issue, I will be sharing many of the frequencies which have been received over the past few months. Thank You to all who have taken the time to share them with me.

If any members have any questions on the VHF Marine band which they would like answered, please advise. If a personal reply is requested, please include a self-addressed, stamped envelope.

Map #	Area Served	Channel	I.D.
19 *	Stratford, CT	24	Bridgeport M.O.
19 *	Monroe, CT	27	Bridgeport M.O.
20	Groton, CT	25&26	New London M.O.
21	Providence, RI	28	Providence M.O.
22	Nantucket Is., MA	84	Nantucket M.O.
23	New Bedford, MA	24&26	New Bedford M.O.
24	Hyannis-Cape Cod,MA	28	Hyannis M.O.
25	Boston, MA	26&27	Boston M.O.
26	Portsmouth, NH	28	Portsmouth M.O.
27	Portland, ME	28	Portland M.O.
28	Camden, ME	26&84	Camden M.O.
29 (1)	Southwest Hbr.,ME	28	SW Harbor M.O.

Footnotes:

* Bridgeport Marine Operator operates two separate sites, one for each frequency.

(1) Southwest Harbor, Maine Marine Operator operates during summer months only (1 June to 1 October)

Map#	Area Served	Channel	I.D.
1	Norfolk/Hampton	26&27	Nflk MO
2	Point Lookout	26	Pt.Lkt MO
3	Prince Frederic	27	Pr.Frd MO
4	Cambridge	28	Camb.MO
5	Baltimore	25&26	Balto.MO
6	Bethesda	28	Wash.MO
7	Ocean City	26	O.City MO
8	Lewes	27	Lewes MO
9	Wilmington	28	Wilm.MO
10	Philadelphia	26	Phil.MO
11	Sea Isle City	26	Atl.City MO
12	Berkely Twp.	27	Tom's R.MO
13	Navesink	24	Sandy Hk MO
14	New York City	25&26&84	N.Y.C.MO
15	Bay Shore L.I.	25	Bay Shr.MO
16	Riverhead L.I.	28	Rivrhd.MO
17	Fishkill-Beacon	27	KLG-325
18	Schenectady	26	KFL-933

FCC TOPICS

George DuBois, Editor

Send FCC news and information of interest that relates to two-way communications above 30 MHz and questions regarding the FCC Rules and Regulations to: George DuBois, 10048 NE Campaign, Portland, OR 97220.

The Telephone Maintenance Radio Service

This is one of those routine services you probably don't think too much about, but it's there to listen to, if you're interested. These frequencies are for use in the construction and maintenance of telephone facilities by communications common carriers. They are not for use for administrative or other business activities. There are only four VHF channels and they are usually used in a repeater configuration. They are 35.16 and 151.985, with the mobile frequencies 43.16 and 158.34, respectively. UHF channels are tne following:

451.175*	451.325	451.425*	451.525*
451.225*	451.350	451.450	451.575*
451.275*	451.375*	451.475*	451.625*
451.300	451.400	451.500	451.675*

The mobile channels are 5 mHz higher. The frequencies marked with an asterisk are shared with other services, but only when the other channels assigned exclusively to that service are filled in a given area. The exception is non-wireline radio common carriers, companies that provide private microwave communications systems, as opposed to Ma Bell, who also provides a wireline service. A few years ago it was pointed out that their needs couldn't be adequately met by the Business Radio Service, so they are eligible on these 10 channels. Channels are also available in the 851-866 band and the 470-512 band. These are the only cities with T-band allocations:

L.A.	NYC	Boston
471.3125	472.9625	471.3125
471.4125	472.9375	471.3375
507.3125	478.9625	471.3625
507.4125	478.9875	471.3875

In Miami, 471.2625, in Dallas, 483.2625, in Houston, 439.2625, going up and down in 25 kHz sequence as required. They are shared with the Power Radio Service. The mobile channels are 3 mHz higher.

If you suspect your local company is on UHF, the first place to search is the 6 exclusive channels, the ones not shared with other services. Usually they have quite elaborate systems, with Touch-Tone selective calling and other niceties. One channel, VHF or otherwise, may be set up for just the installers, or just repair crews, or maybe the buried-cable locaters. In your area, who knows? Program them in and find out.

News from Washington

Among recent proposals before the Commission were the creation of a "Disaster Radio Service", frequencies available to all public safety agencies responsible for emergency services(slim chance), a request to allow stations in the Police Radio Service to transmit with low power on any frequency between 30-50, 150-174 and 450-470 mHz on a non- interference basis (fat chance), and a request to allow Amateur stations to rebroadcast NOAA weather transmissions (why?). More on these as they develop.

The FCC has modified the original proposal for 800 mHz mobile telephone "cellular" systems. They will stick with the

FCC Topics (continued)

present 40 mHz of spectrum, 825-845 and 870-890 mHz, which they figure will meet needs until 1990, but instead of licensing only wireline common carriers (companies that provide regular landline service) any qualified entity will be eligible. They will also be allowed to sell and maintain the equipment, but will still not be allowed to manufacture it. Also, instead of one system in a given market, two companies will be allowed, in which case each company will be allocated 10 mHz in each band. The FCC still envisions a nationwide cellular system, although where the demand is small, a 'cell' could be an entire town. They will also encourage compatability, so the same mobile phone can be used anywhere in the country. Digital modulation is the coming thing so they aren't ruling that out either. Presently only two systems have developmental licenses, one by Illinois Bell Telephone in Chicago and one by American Radio Telephone Service Co. in the Washington,DC-Baltimore, Md. area.

The FCC has also issued a revised proposal for fixed telecommand operations in the 950 mHz area. The original proposal called for shared channels in the land-mobile band and only 3.9 mHz spacing between paired channels (which would increase equipment cost). At the request of the Utilities Telecommunications Council the new proposal calls for 30 paired 25 kHz-bandwidth channels from 952.1125 through 952.8375 mHz with 20 of them reserved for the Power Radio Service for uses like automatic meter reading, radio-controlled load management, and environmental monitoring. The interrogation frequencies would be from 928.1125 through 928.8375 mHz. 50 kHz-bandwidth channels would be spaced in 100 kHz increments from 956.65-959.65, paired with 953.05-956.05. Higher bandwidth channels will also be allocated, which I'll cover later, when the proposal is implemented.

International

Richard Stein, Editor

This column is for reporting two-way communications frequencies above 30 MHz, radio system details, monitoring experiences and any other information relating to monitoring in countries other than the United States and Canada. Send to: Richard Stein, 456 Barrymore Pl., North Brunswick, NJ 08902.

I would like to preface this column with a thank you too all those members who have phoned and written over the past few months. I won't mention any names because a number of members wish to remain annonymous for a number of valid reasons. I would also like to remind the membership that the continued existence of this monthly bulletin depends on your active participation. That means sending in information to the various columns regardless of how small or unimportant you feel the item may be. No piece of information is too small and all submissions are gratefully accepted.

A big thank you to Kenneth Wilson and the men at Bearcat for repairing and returning my BC-250 in rapid fashion. And lastly to the Florida group- your phone call was most intriguing.I would very much like to see some of those frequencies we talked about.

•••••*BERMUDA*•••••

I received a very interesting letter from Delwin Riley, Bermuda-001. Delwin, 25, is a cable splicer for the Bermuda Telephone Company and joined RCMA over 2 years ago. He uses a Realistic 2001, Pro-7B (2), a Realist pocket scanner, DX-160, Regency TMR8A(aircraft), and URR-35 (UHF aircraft) for monitoring. He lives in Smith's Parrish only 5 miles for the US Naval Air station, and monitoring is great.

Actually, Delwin writes, monitoring over the entire island is great since Bermuda, shaped like a fish hook, is only 21 miles square and about 15 miles long from tip to tip. There are a good number of two-way communications and many repeater bases are at the highest points on the island at Prospect Devonshire (350 feet above sea level) and in Smith's Parrish. Most of the systems are American (Motorola, G.E., Johnson) but the Police and the taxis use Pye equipment (English). Only the VHF high and UHF bands are used. There is no local activity on low band. Most systems are straight forward duplex with repeater stations at the higher points thru Bermuda.

The Police use the following system:

Six unscrambled frequencies (paired)

IN	OUT
148.075	153.950
149.150	148.125
149.475	170.550

Four scrambled frequencies (paired)

149.300	170.995
154.100	170.700

All frequencies can be keyed at once if so desired.

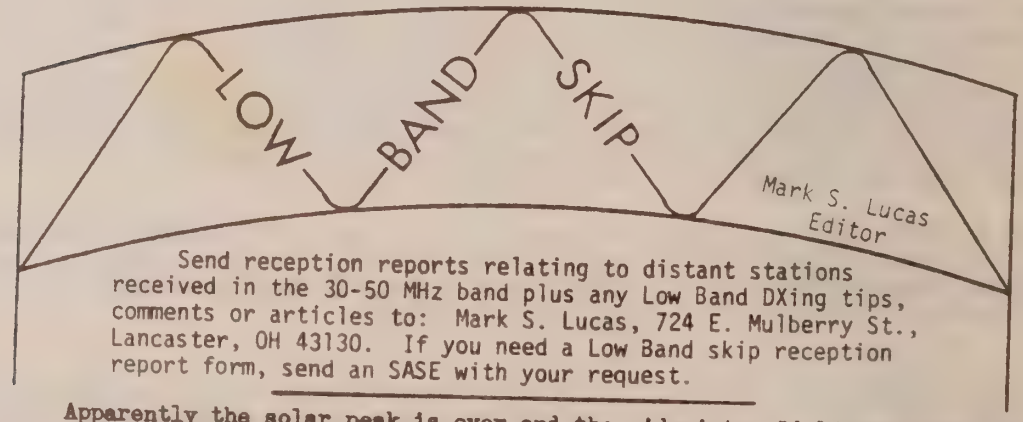
The taxi dispatching system is most interesting. The office dispatches out on UHF (501.3625) to a repeater which then transmits to the taxis on 168.350. In reverse, the taxis transmit to the repeater on 173.150 and this in turn is sent to the base on 501.3625. (It's not clear from the letter if the mobile 173.150 transmission is also repeated on 168.350 to allow for conversation directly between cabs. I will check with Delwin on this and also on the type of scrambling used by the Police.) Marine activity, as might be expected, is high, and low-band skip from the US and stations in Spanish are heard.

Delwin also asks for information concerning repeater systems in general. I would definitely encourage any member with information to write. Delwin would be pleased to hear from you and I think you will be pleased with the colorful stamps that you'll get in return.

Delwin Riley
Harris Bay, Smith's Parrish
Bermuda 303

Until next month, 73 de WB9ZVE.

••••••••••



Send reception reports relating to distant stations received in the 30-50 MHz band plus any Low Band DXing tips, comments or articles to: Mark S. Lucas, 724 E. Mulberry St., Lancaster, OH 43130. If you need a Low Band skip reception report form, send an SASE with your request.

Apparently the solar peak is over and the mid-winter "doldrums" have set in. Low band skip since the first of 1980 has been nearly non-existing. I have a few good loggings this month,but most are prior to 1980. I wonder, did ANYONE log the December Sporadic-E burst of around 21-25 December? Send it in!

FROM BILL (KY-002): " While reading the column in the December newsletter, I decided to try to ID some of the unknown station. Here is what I found——

KAC 969	33.18 MHz	Northern Natural Gas Co., Clifton, KS
KGB 397	37.26 MHz	Milton, PA. (Local Gov't)
KUV 588	31.10 MHz	State of Georgia, Albany
KUV 608	31.10 MHz	State of Georgia, Cordelle
KBG 333	49.52 MHz	Brown & Blakney Inc., Ft. Worth,TX

KBG 333 is NOT licensed on 37.26 as listed. I can only assume Walt heard the call-sign incorrectly. Also, I am a bit disturbed to read that some people/groups are charging outrageous rates to research and ID unknown stations. Therefore my resources are available to anyone requesting help through your column. Anyone wishing to contact me directly need only include a SASE to get a reply."

FROM MARVIN (TX-002): I noticed in your January column that member BILL (CA-LA-009) was trying to ID a station on 37.18 MHz, with a Huntsville PD ID. In "Police Call", VOL.7, there is a listing for Huntsville,TX on 37.18 MHz with callsign KKD 525. This may be the station."

FROM EDDIE (NY-041): 39.44 MHz NO CALL or ID Police

BASE	BC 250	1-20-80	946 EST		

(Editor Notes: Eddie,did they give a Californian ID? There are also two local sheriff agencies which use 39.44 MHz. I need more details to be of benefit!)

			39.44 MHz	NO CALL	"24 Adam"	Sheriff
BASE	BC 250	1-18-80	1450 EST	LASO		3000 Miles
			460.125 MHz	KLR-251	NO ID	Police
BASE	BC 250	1-20-80	949 EST	Boston,Mass.		500 Miles (?)

(Editor's Comments: I wonder if anyone has ever had such an experience on UHF? I know this is not consistant with this column's policy, but when loggings get lean I may ask RCMA executives to flex the rules a bit.)

"Regarding Lybrand (CA-LA-157), Nassau Co. 39.48 MHz and is the 1st and 7th. Precints. 39.44 MHz is the Nassua Co. Detectives."

FROM WALT (CA-OR-179): 42.40 MHz NO CALL or ID State Police

BASE	BC 250	12-23-79	0900 PST	Mass. State Police (West Boylston)	

FROM GEORGE DuBois: 33.16 MHz KWY 348 "Cable Office" Business

Repeater	12-18/20/21-79	1700-1830 PST	Guam Cable TV, Agana, Guam		
		33.94 MHz	KKZ 332	NO ID	FIRE
BASE	12-31-79	1630 PST	Westwego, LA.		
		37.06 MHz	KKS 267	NO ID	Sheriff
BASE	1-1-80	1700 PST	Loggn Co., Arizona		

(Comments: It is about time that some Pacific area skip! I can only wonder if all of you on the west coast are only listening to the VHF/High and UHF bands!)

		40.00 MHz	"Kotzebue Radio"		Military
BASE	12-14-79	1537 PST	U.S. Army A/G		
		41.96 MHz	NO Call or ID		Police
BASE	12-16-79	1130 PST	Ontario Provincial Police		
		37.60 MHz	NO CALL or ID		Military
BASE	12-17-79	1730 PST	U.S. Army, Air Traffic Control, KOREA		
		38.65 MHz	NO CALL or ID		Military
BASE	12-19-79	1640 PST	Taejon, Rep. of Korea "Vanderbilt Golf" US Army		
		32.60 MHz	NO CALL or ID		Broadcasting
BASE	12-19-79	1645 PST	Korea Broadcasting Corp.		

(Editor's Note: I only wonder if this is not a harmonic.)

		33.82 MHz	KFB 978	NO ID	Fire
Base	12-20-79	1606 PST	Navarre,Ohio		
		36.60 MHz	NO CALL or ID		Police
Base	12-23-79	0938 PST	Montral,Canada		
		41.10 MHz	KQB 569	NO ID	State Police
BASE	12-23-79	1110 PST	West Virginia (WHERE?)		
		39.58 MHz	KEF 413	NO ID	Sheriff (?)
BASE	12-23-79	1330 PST	Albany Co., N.Y.		
		41.10 MHz	KIP 603	NO ID	State Police
BASE	12-23-79	1130 PST	Ridgeland, S.C.		
		39.62 MHz	KGA 340		Sheriff
BASE	12-25-79	1000+ PST	Baltimore Co., MD.		
		34.11 MHz	NO CALL or ID		Military
BASE	12-30-79	1130+ PST	Elmandorf AFB, AK. (USAF)		

(Editor's Comment: I wonder if the above military loggings should not have been sent to the Military/Federal column of Robert Grove. PLEASE! Be sure that the loggings get to the PROPER editor as they WILL NOT be redistributed to the proper

Low Band Skip (continued)

person. We do not have the time or finances (read "Stamps") to keep doing this and stay solvent in our own duties and obligations)

Finally, FROM JOHN (MD-016):"In your January 1980 column, Chris (CA-OR-050) had a skip logging on 11-4-79 at 1624 PST.

In looking through my POLICE CALL directory, that skip was most likely Aberdeen,Maryland on 37.18 MHz call KUI 666."

That wraps things up for another month. Remember that Es skip is due within one to two months. So be prepared. Log forms are available from me for a SASE. Stock up while it's fresh in your mind! I DO appreciate when you use them as they make my work a heck of a lot easier!

Aircraft

Mark Holmes, Editor

Send private, commercial, firefighting and law enforcement aircraft frequencies of interest in the 108-136 MHz range and frequencies in other bands associated with airports and aircraft plus questions, articles, and tips related to aircraft monitoring to: Mark Holmes, 1601 W. Maplewood, Marion, IL 62959. Please send all military aircraft frequencies and info to the "MILITARY" column.

EDITOR'S COMMENTS

Thanks to Steve Kozloski (MA-28) for contributing to this months column.

Not all members are fortunate as to live near a large airport or any type of a remote transmitter site. One thing I like to do when traveling, is to make tape recordings of the various types of aircraft communications for my own listening pleasure, because it's nice to hear new voices and different styles for a change. If there are any members who would like to either send or receive cassette tape recordings of aircraft communications by mail, I will list the names of those interested in the July column, however I must receive them no later than May 7, preferably sooner. When writing, please state briefly the type of things that you would most like hear, such as: Approach Control, Departure Control, Tower Controller, Ground Control, Clearance Delivery, ARINC, Airline Company Operational Frequencies, ARTCC high or low altitude sectors, or even Military Aircraft, Air Force Bases or Commercial Airline communications on shortwave.

DEFINITIONS

AIRWAY An air route between two VOR/VORTAC stations on the earth's surface. Low altitude routes are called Victor Airways and high altitude routes are called Jet Routes.

INSTRUMENT APPROACH "TWA 479 IS CLEARED FOR ILS RUNWAY 30 LEFT APPROACH, MAINTAIN 2,000 TILL ESTABLISHED ON LOCALIZER" A series of predetermined maneuvers for the orderly transfer of an aircraft under IFR conditions from the beginning of the initial approach to a landing, or to a point from which a landing may be made visually.

JET ROUTE "EASTERN 711 TURN LEFT HEADING 110 DEGREES, INTERCEPT J-45 ON COURSE" High altitude airways which extend from 18,000 feet to and including 45,000 feet. Airways which are even-numbered are east-west routes (J-80, J-66, etc.) and airways which are odd-numbered are north-south routes. (J-51, J-71, etc.)

PROFILE DESCENT "PSA 53 IS CLEARED FOR THE RUNWAY 25 PROFILE DESCENT, LOS ANGELES ALTIMETER IS THREE ZERO ZERO NINER" An uninterrupted descent from cruising altitude to interception of a glide slope or to a minimum altitude specified for the initial approach segment of an instrument approach.

STANDARD INSTRUMENT DEPARTURE "CONTINENTAL 803 IS CLEARED AS FILED, DENVER 5 DEPARTURE, SQUAWK CODE ONE ONE TWO SIX AND DEPARTURE CONTROL FREQUENCY WILL BE 128.05" A published departure clearance designed to reduce communication time. Each SID is named and numbered and directs aircraft to an enroute fix via the routing designated in the clearance.

STANDARD TERMINAL ARRIVAL ROUTE "DELTA 262 IS CLEARED TO ATLANTA VIA THE ROME 9 ARRIVAL, NASHVILLE TRANSITION" A published arrival clearance designed to reduce communication time. Each STAR is named and numbered and directs aircraft into the terminal area via the routing designated in the clearance.

VICTOR AIRWAYS "BEECH 7421E ROUTING CHANGE, AFTER GAINSVILLE JOIN VICTOR-157 TO OCALA, VICTOR-159 TO ORLANDO, FLIGHT PLAN ROUTE" Low altitude airways which extend from the surface to, but not including 18,000 feet. Airways which are even-numbered are are east-west routes (V-8, V-208, etc.) and airways which are odd-numbered are north-south routes. (V-313, V-429, etc.)

AERONAUTICAL CHARTS

Listed below are descriptions of the most common types of charts for use with aircraft monitoring, who prints them, where to obtain them, and a brief comparison.

SECTIONAL CHARTS Besides portraying the low altitude airways, navigational radio aids and pertinent information like that, they feature topographic information, tall obstructions, highways, railroads, cities, landmarks, airports and graphic portrayal of controlled airspace in the airport vicinity. These charts are available in many geographic coverages for the United States.

Printed only by National Ocean Survey and are well worth the money.

WORLD AERONAUTICAL CHARTS These charts are much like Sectional Charts, however they cover a greater area in much less detail. In addition to portraying the low altitude airways and navigational radio aids, they feature topographic information, principal highways, railroads, cities, critical tall obstructions and distinctive landmarks. These charts are available in several geographic coverages for the United States.

Printed only by National Ocean Survey and are well worth the money.

TERMINAL AREA CHARTS These charts depict the airspace designated as Terminal Control Areas for 22 airports in the United States, plus Anchorage, Alaska. The charts portray low altitude airways, navigational radio aids, controlled airspace and other related data.

Printed by National Ocean Survey and Jeppesen, and while both charts are very nice, the NOS chart is primarily for VFR navigation and the Jeppesen is for IFR navigation, with intersections and the Jet Routes superimposed.

ENROUTE LOW ALTITUDE CHARTS These charts provide aeronautical information for IFR navigation, below 18,000 feet. Portrays low altitude airways, radio navigation aids, designated holding patterns, intersections, airway distances, restricted airspace areas, ARTCC low altitude frequencies and transmitter site locations, airport frequencies, and other related information. Available in various geographic coverages.

Printed by National Ocean Survey and Jeppesen and both charts are very nice, however the Jeppesen charts have the Jet Routes superimposed in the color of green to show the relationship between the low altitude airways and the high altitude airways.

ENROUTE HIGH ALTITUDE CHARTS Provides aeronautical information for IFR navigation from 18,000 feet to and including 45,000 feet. Portrays the Jet Routes, radio navigation aids and airway distances. 2 charts cover the continental United States.

Printed by National Ocean Survey and Jeppesen and both charts are very nice, however I would recommend ordering neither one of them, simply because the Jet Routes are portrayed fully on the Low Altitude Enroute Charts by Jeppesen.

INSTRUMENT APPROACH CHARTS Portray the aeronautical data which is required to execute instrument approaches to airports, such as ILS, MLS, VOR and NDB approaches.

STANDARD INSTRUMENT DEPARTURE CHARTS Portrays the departure routing clearance in graphic and textual form.

PROFILE DESCENT CHARTS Portrays the routing, crossing altitudes, speed restrictions and headings to be flown in graphic and textual form.

STANDARD TERMINAL ARRIVAL ROUTE CHARTS Preplanned IFR arrival route procedure portrayed in graphic and textual form.

Instrument Approach Charts, SID's, STAR's and Profile Descent Charts are printed by National Ocean Survey and Jeppesen. Pro Plates prints only Instrument Approach Charts. The NOS charts are ideal if a person wants only one thing or the other, but if everything is desired, they are not very handy because there are to many different books

to purchase, plus the information is outdated every 56 days. With Jeppesen, the information is all together, with revisions on a weekly basis for only the charts which warrant a change, however a binder/binders will need to be purchased along with the charts. Pro Plates prints Instrument Approach Charts on an annual basis in 3 different geographic coverages and revisions are nothing more than printed information for individuals to have to decipher.

For catalogs, prices and ordering information, write to the addresses listed below.

National Ocean Survey	Pro Plates	Jeppesen
Distribution Division (C-44)	13376 Beech Ave.	8025 E. 40th Ave.
Riverdale, MD 20840	Venice, CA 90291	Denver, CO 80207

FREQUENCIES

Steve Kozloski (MA-28) has submitted quite a bit of information about the Civil Air Patrol for the Northeastern United States. Steve also reported that on a nationwide basis, the C.A.P. Repeater Input frequency is 143.9 and the C.A.P. Repeater Output and Simplex frequency is 148.15. Steve is also waiting for verification of some new input frequency allocations and will send them into this column in the future.
Listed below are the C.A.P. Tactical Calls and Callsigns for the Northeast. Each unit use the Tactical Call for their type of service along with their specific number, for example: FREEDOM 110, PILGRIM 160 or CLIPPER 145. Members desiring a list for their own area, please send a self addressed stamped envelope to Steve Kozloski, 11 Parsons Street, Easthampton, MA 01027.

STATE	CALLSIGN	FIXED	MOBILE	AIR
Connecticut	KCC-590	Nutmeg	Rambler	Rocket
Maine	KCC-591	Pinetree	Pinekarr	Pineayr
Massachusetts	KCC-592	Freedom	Pilgrim	Clipper
New Hampshire	KCC-593	Profile	Bobcat	Saucer
New Jersey	KEC-994	Zig Zag	Domino	Aircap
New York	KEC-995	Empire	Tomcat	Wildcap
Pennsylvania	KGC-465	Keystone	Rolling Stone	Flight Stone
Rhode Island	KCC-594	Rhody	Little Rhody	Air Rhody
Vermont	KCC-595	Pico	Marble	Mansfield

FEDERAL GOV'T and ☆ MILITARY ☆

Robert B. Grove, Editor

Send all Federal Government and Military frequencies (including those of military aircraft), radio system details, and related questions to: Robert B. Grove, Route 1-Box 156, Brasstown, NC 28902. Sensitive frequencies will not be published. Coast Guard material must go to the VHF Marine editor.

IT'S HERE! The long-awaited collection of IRAC frequency information has been published. The FEDERAL FREQUENCY DIRECTORY contains over 100,000 entries of frequencies, agencies, and their locations! Frequency range is 2-420 MHz INCLUSIVE! No listing has been deleted. This collection contains 100% of everything on file at IRAC which is releasable to the public under the Freedom of Information Act in that frequency range.

In order to be assured that the federal government would not be upset by this first mass publication of their frequency files, I contacted the IRAC legal counsel. According to their correspondence, anything which they divulge may be published, and they have no objections. Pursuing the question in more detail, I was advised by IRAC legal counsel that section 605 clearly prohibits divulging the contents, nature, or purport of a transmission, but not the frequency or agency using it. They went on further to state that there is no problem with anyone

publishing any frequency of any nature, just so long as the contents of traffic was not divulged. In certain cases, where security of the country is in question, there might be a restraining order issued; but once the information is out there is little anyone can do about it.

Although the cost of the list plus the cost of publication is staggering, hopefully it will be recoverable through sales.

The entire directory will be sold for only $14.95, a far cry from our original $100 estimate for cost sharing! Members may send their checks to the address in this column heading.

I have personally checked through the listings to be sure that sensitive frequencies are not accidentally included. I was astounded at the number of frequencies which we regard as sensitive that the government apparently does not!

The bottom line is this: We must use our best judgment when considering which frequencies to list. Perhaps we should use the IRAC unclassified master file as a guide. If in doubt, don't publish!

Federal government agencies have an opportunity to remove their own listings when such exclusion is justified. Many have done so (even though we may question their "sensitivity"), and many have not (even though we may suspect that they should have!).

Searching in retrospect, I find that I have divulged in my columns one or two listings not on the unclassified master file list. Why they are excluded I do not know, but now I have a guide for future listings!

Some of the listings appear at first to be rather capricious: While most (but not all) Justice Department listings are deleted, a whole raft of Treasury assignments are included! While the FCC is not a law enforcement bureau, their assignments are excluded; and yet in spite of the spectre of nuclear terrorism, every DOE assignment is clearly shown!

Indeed, the foot-high stack of pages which I originally received to re-organize into a manageable book presented endless hours of intrigue.

THIS MONTH FROM OUR MEMBERS:

From Joe (MD-002)

34.89	AR Corps of Engineers, Little Rock, AR (and Vicksburg, MS..ed.)
36.55	AR Ft. Myers, VA fire dept. F-1
36.99	AR Ft. Myers, VA fire dept. F-2
38.50	National Guard, Arkansas operations (nationwide...ed.)
38.60	National Guard, AR security/fire
38.89	AR Corps of Engineers, Vicksburg, AR
46.79	Armed Forces Police, New York City
46.85	AR Vint Hill, VA fire dept.
139.500	USN Surface Weapons Center, MD fire dept (Key West "Hurricane Net".ed.)
140.100	USMC Quantico, VA fire dept. (El Toro, CA...probably nationwide...ed)
140.275	National Naval Medical Center, MD fire dept. F-2
140.460	USN Ship Research and Development, MD fire dept. (also Pt. Molate, CA taxi...ed)
140.725	National Naval Medical Center, MD fire dept. F-1 (main)
148.300	USN District, Washington, DC fire dept. Command F-2
148.310	USN District, Washington, DC fire dept. Operations F-2
148.425	USN Academy, Annapolis, MD fire dept. "Chimes"
149.270	AF Little Rock, AR base security
149.290	USN Academy, Annapolis, MD maintenance
149.350	USMC Quantico, VA fire dept. F-1
149.430	USN Academy, Annapolis, MD (also Long Beach and Pt. Loma, CA...ed.)
149.450	USN Communications Unit fire dept, Cheltenham, MD F-1
150.150	USN Communications Unit fire dept., Cheltenham, MD F-2
150.725	US Aquaduct Police, Washington, DC
163.0625	GSA security, Baltimore, MD
163.275	US Superior Court Police, Washington, DC
163.4125	AR Corps of Engineers, Arkansas River (nationwide...ed)
163.4375	AR Corps of Engineers, Baltimore, MD (nationwide...ed)
163.4625	AF Little Rock, AR base security (nationwide...ed)
163.4875	AF Blytheville, AR taxi/engineers
163.5125	AF Blytheville, AR Air Police (security nationwide...ed)
163.5625	AR Ft. Meade, MD M.P.

To be continued next month; Thanks JOE!

Federal Gov't/Military (continued)

From Russell (AR-003) Little Rock, AFB, Jacksonville, AR
148.035 Aircraft maintenance
148.095 Aircraft maintenance
148.200 unknown use
148.800 unknown use
149.265 Titan II missile silos, security patrol repeater
149.565 Command Post mobile telephone
150.050 general utility use
150.200 Aircraft maintenance
150.315 Aircraft maintenance; shuttle service
163.4625 security control
163.4875 control
163.5125 Defense control
165.1125 Commander mobile phone
173.5875 Crash control
Camp Robinson National Guard, North Little Rock, AR
41.50 Control tower (helicopters)
139.200 Control tower (helicopters)
165.0875 AR Pine Bluff Arsenal, AR
Nice list; thanks, RUSSELL!

From Don LeFevre...Homestead AFB
148.466 Maintenance
148.550 Maintenance
149.565 Mobile telephone (Tactical Air Command)
163.5875 Security
163.5125 Security Police and missile support
149.925 Dispatch
150.200 Maintenance (D net 150.195?...ed)
150.250 TAC Maintenance B net
149.930 Fueling
148.845 Reserve maintenance net
163.5375 Fueling
173.4875 Fire
173.5875 Crash
126.2/295.7 Tower air-to-ground
Thanks, DON!

From Bob Rankin
149.175 AF Whiteman AFB, MO missile net, ch.2
168.575 VA Hospital, Leavenworth, KS (NOTE: not Ft. Leavenworth)
173.4875 AR Disciplinary Barracks, Ft. Leavenworth, KS (NOTE: not the federal prison)
165.0265 AR MP's, Ft. Leavenworth, KS base police (NOTE: Not prison police)
170.875 US Bureau of Prisons, Ft. Leavenworth, KS (NOTE: No relation to ARbase)
Thanks, Bob, for straightening us out on the two independent services.

From Joe (MD-005)
166.350/166.950 National Park Service, C&O Canal
KQC716 Great Falls, VA
KQC720 Harper's Ferry, WV
KQC728 Great Falls, MD; Sharpsburg, MD
KQC730 Old Towne District maintenance, Hancock, MD
KQC734 Allegheny, MD ARCA
171.525 USDA George Washington Nat'l Forest, VA primary
172.325 USDA George Washington Nat'l Forest, VA repeater
162.025 USDA Sawtooth National Forest, ID primary
162.6125 USDA Sawtooth National Forest, ID repeater
169.875 USDA Challis National Forest, ID primary
170.475 USDA Challis National Forest, ID repeater
Thanks for these fine contributions, JOE!

From Paul (MA-010)
171.525 Cape Cod National Seashore repeater input
171.725 Cape Cod National Seashore repeater output
163.4125 AR Corps of Engineers, Cape Cod Canal
Thanks for sharing these with our readers, PAUL.

In closing, a number of members have contributed thoughts on "Where have the Feds gone?" Mike (MI-016) reports that although he has noted no reduction in traffic, there does seem to be more voice security (scrambling). Others report everything from virtually no change, to great reduction! At this point, anything is open to conjecture. I suspect that while it is likely that some minor shifts to other frequencies may be taking place, it is very minimal. More likely, awareness of eavesdropping has made Federal communicators mike shy, and they have been curbing their on-air time to necessary use.

Mike (MO-002) is typical of our readers who own crystal scanners. He would like to know how to perk up sensitivity outside the normal range. The problem with these scanners is that they have no automatic way of tracking the frequency changes of the crystals as have programmable scanners. Most manufacturers factory-align their receivers for performance in the more common 152-159 MHz range. There are two ways of re-aligning these fixed-tuned scanners: Center-frequency peaking and stagger-tuning. If the scanner is to be used over a small frequency excursion (say, a few MHz), then its RF amplifier stages should be aligned for maximum signal strength at the middle of that range. This will also provide best performance. If the scanner must be scanned over an entire band, each RF coil is peaked slightly different from the former, making response more uniform over the entire range. A sweep generator and oscilloscope are recommended for this technique.

Well, that's it for this month. I would like to thank our members who continue to send such enjoyable and informative letters, and look for more of them next month!

MARKETPLACE

Members may advertise, free of charge, items wanted, items for sale and items for trade that are associated with the hobby of monitor radio listening above 30 MHz. No dealer ads accepted. Send to: Larry H. Brown, 1717 Leith St., Flint, MI 48506. RCMA assumes no responsibility for the outcome of any transactions between members resulting from ads in this column.

FOR SALE: Regency ACT-T-16K scanner; excellent condition. Will ship prepaid via UPS. $175.00. Robert Paepke (NY-018), RD 12 Box 577, Clifton Park, New York 12065. (518) 371-3159 late evenings.

FOR SALE: Regency ACT-T-16K scanner in excellent condition. Will ship prepaid via UPS for $175.00. Ronald Burgers (IA-10), 1311 14th St. Rock Valley, Iowa 51247. (712) 476-2302.

FOR SALE: SBE Optiscan model 12SM. 9 channel scanner needs bulb for 10th channel. Excellent reception, includes 11 program cards, AC & DC cords, and mounting hardware. VHF Hi-Low and UHF Hi-Low with program book and earphone. $160.00 includes shipping costs. Ray Willcox (PA-004), 17 N. Schaeffer St., Allentown, PA. 18104. (215) 398-0050.

FOR SALE: 4 channel Radio Shack VHF Hi/Lo scanner complete with rechargeable batteries, 2 chargers, 2 rubber antennas, belt clip, earphone, and the following crystals: 33.72, 33.98, 159.09, 158.775, 158.85, and 33.52. $110.00 includes shipping costs. Ray Willcox (PA-004), 17 N. Schaeffer St., Allentown, PA. 18104 (215) 398-0050.

FOR SALE: Bearcat 210 scanner, still under warranty and in excellent condition. $175.00 will ship UPS in the USA. I will pay shipping. Michael Cox (SC-005), Rt. 1 Box 86, Garden City Beach, South Carolina 29576. (803) 651-3715.

FOR SALE: Bearcat 210 like new and in excellent condition. With all accessories and original carton. $200.00 includes shipping; send cashiers check or money order. Rick Poorman (OH-019), 327 Marion Ave Marion, Ohio 43302. (614) 382-5171, 4-10 p.m. EDT.

FOR SALE: RCA # 16S300 scanner. 120 VAC/12 VDC; 3 band, 8 channel with scan delay. Excellent reception and condition. $85.00 includes shipping. Andy Cohan, (DE-004), P.O. Box 634, Newark, Delaware 19711.

FOR SALE: (1) Bearcat 210, was early model that has new circuit board installed by warranty with Electra Corp. $150.00. (2) Pace model 10-44 scanner. 4 channels cover 450-470 MHz. $50.00. (3) Crystals for pace scanner; should work in Regency scanners (10.7 IF) 453.05, 453.15, 453.20, 453.375, 453.40, 453.425, 453.475, 453.70, 453.80, 453.85, and 453.975. $2.00 each. Charles D. Martin (MD-004), 1906 Old Annapolis Blvd., Annapolis, MD. 21401. (301) 757-2997.

WANTED: Any type of tunable receiver or scanner that can receive 30-50 and 450-512 MHz. Should be in good to excellent condition. Chester Williams (LA-007), 1834 Cambronne St, New Orleans, LA 70118.

FOR SALE: Regency type 10.7 IF crystals made by M-tron and guaranteed for life. 154.65, 154.77, 158.85, and 159.15 MHz. $2.50 each. Tom Heiderer, 3888 S. Hanson Ave., Milwaukee, WI. 53207.

FOR SALE: Realistic PRO-7B VHF-HI crystal controlled scanner in good condition. Includes mobile mounting bracket and instruction booklet. $70.00 plus shipping charges. Eric Vincent (CA-LA-216), 720 West 27th St., #233, Los Angeles, California 90007.

FOR SALE: (1) Regency crystals for the following frequencies; 33.74, 33.82, 39.14, 39.20, 39.58, 39.76, 42.34, 42.40, 42.44, 42.50, 44.74, 45.78, 45.82, 154.22, 154.665, 156.80, 155.01, 155.64, 155.70, 158.97, 159.03, 453.20, 460.125, 460.30, 460.45, 460.50, 463.025, and 468.025. $2.00 each or all for $35.00. (2) Sonar VHF Sentry, model FR-103SA, AM-VHF (150-175 MHz) 9V portable receiver, with instructions and never used, $10.00. (3) One copy of Signal 10-11 Manual for Monitoring the California Highway Patrol in good condition, you make offer on price. Don Shanly (CT-003), P.O. Box 147, Farmington, CT. 06032.

As of February 9, 1980,
RCMA had 1343 members in 49 states and 10 foreign countries

ALABAMA 6	MAINE 10	PENNSYLVANIA ... 43
ALASKA 1	MARYLAND 18	RHODE ISLAND 4
ARIZONA 15	MASSACHUSETTS .. 36	SOUTH CAROLINA .. 6
ARKANSAS 3	MICHIGAN 35	SOUTH DAKOTA 1
CALIFORNIA .. 532	MINNESOTA 15	TENNESSEE 6
COLORADO 11	MISSISSIPPI 4	TEXAS 32
CONNECTICUT ...20	MISSOURI 14	UTAH 1
DELAWARE 4	MONTANA 1	VERMONT 1
DC 1	NEBRASKA 2	VIRGINIA 21
FLORIDA 39	NEVADA 2	WASHINGTON 13
GEORGIA 17	NEW HAMPSHIRE ... 8	WEST VIRGINIA ... 7
HAWAII 1	NEW JERSEY 38	WISCONSIN 13
IDAHO 2	NEW MEXICO 0	WYOMING 3
ILLINOIS 91	NEW YORK 79	BERMUDA 1
INDIANA 25	NORTH CAROLINA .. 12	CANADA 40
IOWA 11	NORTH DAKOTA 1	ENGLAND 1
KANSAS 9	OHIO 40	ICELAND 1
KENTUCKY 8	OKLAHOMA 10	MEXICO 1
LOUISIANA 9	OREGON 13	NETH.ANTILLES 1
		NO. IRELAND 1
		PUERTO RICO 1
		SAUDI ARABIA 1
		SWEDEN 1

NEW MEMBERS

CA-AL-016 Al Wadel, 466 C Pacific Ave., Alameda, CA 94501
CA-AL-016 Roger Levenson, Box 1286, Berkeley, CA 94701
CA-KE-004 J. D. Goodman, P.O. Box 413, Inyokern, CA 93527
CA-KE-005 Gregory D. Cossey, 3700 Q St., Apt. 51, Bakersfield, CA 93301
CA-LA-238 Durez Robinson, 1203 E 74 St., Los Angeles, CA 90001
CA-LA-239 Michael Jones, 339 N. Columbus Ave., Glendale, CA 91203
CA-LA-240 Len Kushner, 1635 Camino De Villas, Burbank, CA 91501
CA-LA-241 David L. Koval, 4228 Woodcliff Rd., Sherman Oaks, CA 91403
CA-LA-242 R. R. Rath, P.O. Box 2354, Rancho Palos Verdes, CA 90274
CA-LA-243 Manuel Caballero, 500 W. Lexington Dr., Glendale, CA 91203
CA-LA-244 Harold Puritz, Culver City, CA
CA-LA-245 Al Jones, P.O. Box 14543, Long Beach, CA 90814
CA-LA-246 Frank L. Gore, 827 So. St. Andrews Pl. #16, Los Angeles, CA 90005
CA-LA-247 David Zeiler, 4336 Alonzo Ave., Encino, CA 91316
CA-NV-001 Russ Ralphs, 11722 Sutton Way, Grass Valley, CA 95945
CA-OR-138 Harry E. Davis, 1019 So. Pine Dr., Fullerton, CA 92633
CA-OR-139 Alex R. Hemphill, 11250 Beach Blvd.,Sp. 131, Stanton, CA 90680
CA-OR-140 D. E. Freeland, 1007 S. Adams Ave., Fullerton, CA 92632
CA-OR-141 Bill Louis, 6362 St. Paul Circle, Huntington Beach, CA 92647
CA-OR-142 John J. Naughton, 1540 W. Ball Rd. #16L, Anaheim, CA 92802
CA-OR-143 Martin Anderson, 1061 Bradcliff, Santa Ana, CA 92705
CA-OR-144 Bob Whitson, 4200 Trabuco Rd., Irvine, CA 92714
CA-RI-024 Joe G. Bennett, 1137 Hummingbird Lane, Corona, CA 91720
CA-SA-007 Joan & Tom Henley, 3404 Toledo Way, Sacramento, CA 95821
CA-SB-021 Cecelia Mayer, 9591 Blanchard, Fontana, CA 92335
CA-SD-025 Milton, San Diego, CA
CA-YO-002 Garry Pratt, 250 Touchstone Pl., W. Sacramento, CA 95691
CO-009 Steve R. Bradley, 2248 50th Ave., Greeley, CO 80631
CO-010 David A. Rains, 935 N. 19th St., Apt. 21, Colorado Springs, CO 80904
CT-021 Robert E. Dawley, R.F.D. #1, Norwich, CT 06360
FL-038 David R. Morris, 1911 45th Street Court, East, Bradenton, FL 33508
FL-040 G. Lawrence Roberts, Jr., P.O. Box 518, Odessa, FL 33556
GA-016 Robert W. Currey, P.O. Box 5397, Macon, GA 31208
GA-017 Thomas F. Cunningham, Jr., 4844 Valley View Ct., Dunwoody, GA 30338
HI-001 William Stookey, 1617 Miller St., #3, Honolulu, HI 96813
IA-013 Kenneth J. Veach, 525 Hamilton, Ottumwa, IA 52501
IL-073 Gary Bottrell, 405 East Kern St., Springfield, IL 62703
IL-074 Jim Nicholson, 221 Monticello Pl., Fairview Heights, IL 62208
IL-075 Michael J. Angerame, 6745 W. Belmont Ave., Chicago, IL 60634
IL-076 Woody Partain, 708 Downey Dr., Princeton, IL 61356
IL-077 Raymond J. Kaider, 1908 S. Union Ave., Chicago, IL 60616
IL-078 G. R. Dopp, 299 Oakwood, Crete, IL 60417
IL-079 James P. Lynn, 4152 N. Pioneer Ave., Chicago, IL 60634
IL-080 Thomas E. Ihle, 335 N. 22nd St., Murphysboro, IL 62966
IL-081 R. W. Erdman, Jr., 382 N. Worth Ave., Elgin, IL 60120
IL-082 Jim Nied, 9913 Stacy Lane, Union, IL 60180
IL-083 Ronald Pokatiloff, 417 Hull Ct., Waukegan, IL 60085
IL-084 Brandt I. Niemuth, P.O. Box 541, Rosemont, IL 60018
IL-085 Terry R. Scott, 1214 Grove St., Aurora, IL 60505
IL-086 Joey Dimartino, 5030 N. Marine Dr., Apt. 1201, Chicago, IL 60640
IL-087 Daniel J. White, Seneca Estates Lot 13, Seneca, IL 61360
IL-088 David Whiskeyman, 1633 W. Estes Ave., Chicago, IL 60626
IL-089 John A. San Filippo, Jr., 2246 N. 74th Ct., Elmwood Park, IL 60635
IN-021 Theodore A. Winkel, 607 East St., Madison, IN 47250
IN-022 Mary L. Jordan, 1911 Lake Shore Dr., L.B., Michigan City, IN 46360
IN-023 Ray Hill, 636 E. Washington St., Greencastle, IN 46135
KS-009 Bill Bruner, 404 Emery, Mulvane, KS 67110
KY-007 Dale E. Leslie, 218 E. Belleville St., Marion, KY 42064
KY-008 William K. Rutherford, 523 N. 3rd St., Bardstown, KY 40004
MA-033 William Head, 17 Hefferan St., Apt. F, Allston, MA 02134
MA-034 Robert B. Porter, 14 Beacon St. #7, Lawrence, MA 01843
MA-035 John Ferraro, 238 Eliot St., Milton, MA 02187
MA-036 Dana C. Warburton, 461 Gilbert St., Mansfield, MA 02048
MD-017 Stephen M. Lichtman, 11301 Monticello Ave., Silver Spring, MD 20902
MD-018 Clark Johnson, 7808 Misty Ct., Gaithersburg, MD 20760
ME-009 Karl P. Gustafson, R.R. 2, Box 152, Bowdoinham, ME 04008
ME-010 Timothy V. Welch, East Livermore, ME 04228

Membership List (continued)

MI-029 John Descheemaeker, 50465 Card Rd., Mount Clemens, MI 48044
MI-030 Harold J. Pfister, 205 Riveroaks Dr., Plymouth, MI 48170
MI-031 Richard McLaughlin, Jr., 4237 Dickman 3b, Springfield, MI 49015
MI-032 Ray Kain, 26319 Princeton, St. Clair Shores, MI 48081
MI-033 David I. Mitchell, 623 N. Broad St., Adrian, MI 49221
MI-034 Larry Simon, 1351 Colton, Detroit, MI 48203
MI-035 Dennis Smolinski, 11459 Garbor, Warren, MI 48093
MI-036 Emer Christie, 5786 Aztec Lane, Howell, MI 48843
MN-013 Charles Sandey, 4154 Sheridan Ave. No., Minneapolis, MN 55412
MN-014 John, St. Paul, MN
MO-013 Kenneth O. Ramsey, 15486 Country Mill Dr., Chesterfield, MO 63017
MO-014 Frank W. Roth, 641 Highland Park Dr., Apt. C, Chesterfield, MO 63017
MO-015 Ed Diederich, 216 Roderick Dr., St. Louis, MO 63137
MS-004 James S. Brown, 102 Sycamore St., Leland, MS 38756
NC-011 Randy Zimtbaum, 106 Caprice Circle, Lincolnton, NC 28092
NJ-033 B. I. Wynn, 1000 Warwick Rd., Haddonfield, NJ 08033
NJ-034 William Mulhall, 921 McGillvray Pl., Linden, NJ 07036
NJ-035 Bob Umhoefer, R.D. 2, Box 60, Valley Crest Rd., Annandale, NJ 08801
NY-073 John Ching, 4318 Flatlands Ave., Brooklyn, NY 11234
NY-074 Kenneth Kopec, 57 Clayton St., Buffalo, NY 14207
NY-075 Gardner Lorimer, 31 Harbor Hills Dr., Port Jefferson, NY 11777
NY-076 Elmer F. Rowekamp, 176 Northington, East Amherst, NY 14051
NY-077 P. Donald Haney, 526 Giordano Dr., Yorktown Heights, NY 10598
NY-078 Joseph L. Clark, P.O. Box 1432, Newburgh, NY 12550
NY-079 Jeffrey Freed, 97-15 77th St., Ozone Park, NY 11416
NY-080 Dennis Knowles, 102-22 92nd Ave., Richmond Hill, NY 11418
OH-036 Terry Mefford, 341 Geron Dr., Springfield, OH 45505
OH-037 David P. Onstott, 3451 State Rte #7, P.O. Box 68, Hartford, OH 44424
OH-038 Foster Buswell, 18177 Vermont St., Grafton, OH 44044
OH-039 W. Thomas Blair, 466 Suzanne Dr., Kent, OH 44240
OH-040 Charles F. Morrison, 147 Plumwood Rd. #413, Dayton, OH 45409
OH-041 David J. Myers, 312 Main St., Castalia, OH 44824
OK-009 Phleat, Springer, OK
PA-041 George P. Avery, 1001 Baird Ave., Yeadon, PA 19050
PA-042 Don Smith, 319 No. Williamson Rd., Blossburg, PA 16912
PA-043 Paul J. Buechel, 3049 Churchview Ave., Pittsburgh, PA 15227
PA-044 Donald Simon, L-19 Richland Meadows, Quakertown, PA 18951
TN-006 Norbert M. Boner, P.O. Box 12, Covington, TN 38019
TX-031 Harry A. Eaton, 5404 Cedar Creek, Houston, TX 77056
TX-032 David C. Litsinger, 2704 La Mesa Dr., Austin, TX 78704
VA-018 Burton J. Gwinn, Jr., Rt. 2, Box 360B, Valley Ridge, Covington, VA 24426
VA-019 Herman D. Bailey, Rt. 1, Box 339, Warsaw, VA 22572
VA-020 Joshua R. Davis, 3565 Orange St., Norfolk, VA 23513
WV-007 Kevin E. Hanne, 735 Virginia Ave., Apt. 2, Fairmont, WV 26554
CAN-032 Ted Hanifan, 1418 Parent Ave., Windsor, Ontario, Canada N8X 4J5
CAN-033 Jack A. Smith, 26 Simcoe Blvd., Simcoe, Ontario, Canada N3Y 3L7
CAN-034 Carman G. Fraser, Box 81, Apple Hill, Ontario, Canada K0C 1B0
CAN-036 Lloyd B. Hodges, P.O. Box 63, Dunnville, Ontario, Canada N1A 2X1
CAN-037 David J. Dube, 1127 Howard Ave., Windsor, Ontario, Canada N9A 1S6
CAN-038 Ken Heatley, 3566 Triumph St., Vancouver, B.C., Canada V5K 1V1
CAN-039 J. Nicholas Smith, 2220 Halifax Dr., Apt. 1101, Ottawa, Ontario, Canada K1G 2W7
CAN-040 A. M. Jeffery, 182 Commissioners Rd. East, London, Ontario, Canada N6C 2T1
CAN-041 Douglas C. McDougall, Apt. 408, 1830-11 Ave. SW, Calgary, Alberta, Canada
NIRE-001 David H. Ramsay, 12 Rotherwood Dr., Kilfennan, Londonderry, BT47 1SY Northern Ireland

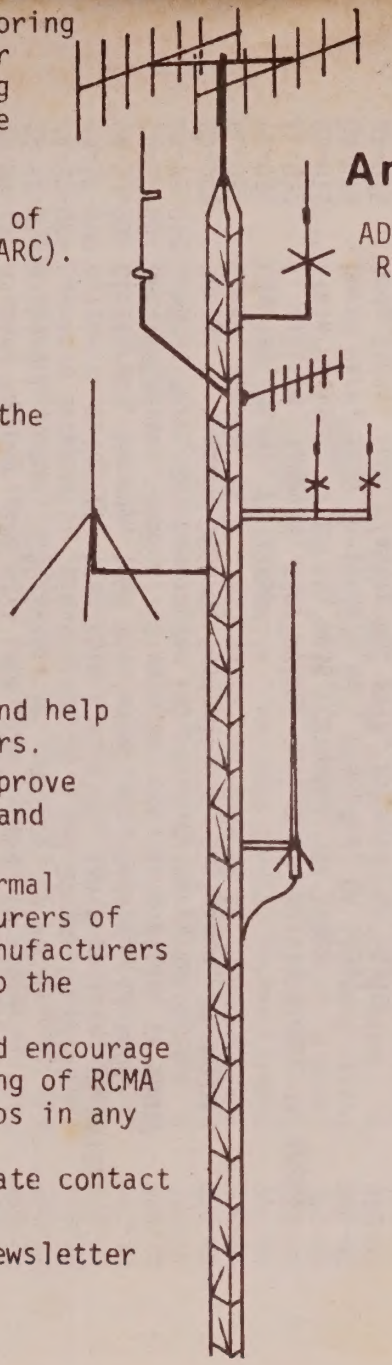
NEW MEMBERS

AL-006 Richard J. Palsulich, 104 Chewalla Dr., Enterprise, AL 36330
AZ-013 Wm. R. Gardner, 14450 N. Fountain Hills Blvd., Fountain Hills, AZ 85268
AZ-014 T. B. Cox, Jr., 2350 Snavely, Kingman, AZ 86401
CA-AL-014 James A. Herbert, 2415 Durant Ave., Berkeley, CA 94704
CA-AL-015 Gene Amaral, 1444 152nd Ave., San Leandro, CA 94578
CA-LA-235 Roger Powell, 7807 Devenir St., Downey, CA 90242
CA-LA-236 Darris R. Miller, 2613 Mathews, Apt. #2, Redondo Beach, CA 90278
CA-LA-237 Carol Scott Bardwick, 1260 Las Lomas Ave., Pacific Palisades, CA 90272
CA-LK-001 Francis J. Ralph, P.O. Box 460, Clearlake Highlands, CA 95422
CA-ME-008 Ernest A. Comer, 1036 2nd St., Novato, CA 94947
CA-OR-135 Terry P. Mathers, 8132 Imperial Ave., Garden Grove, CA 92644
CA-OR-136 Steve Fletcher, 7519 Twinleaf Trail, Orange, CA 92669
CA-OR-137 Richard Koehler, 306 Alva Lane, Costa Mesa, CA 92627
CA-SC-015 Richard L. Urban, 1280 Swaner Dr., Gilroy, CA 95020
CA-SD-024 Lawrence Brookwell, 1826 Cypress St., San Diego, CA 92154
CA-SF-010 Walter T. Haley II, 1280 15th Ave. #105, San Francisco, CA 94122
CA-SH-002 Clifford G. Harvey, 1698 Mistletoe Lane, Redding, CA 96001
CA-SR-007 Dennis Stevens, 6657 El Colegio Rd. #46, Isla Vista, CA 93017
CA-VE-012 John W. Parr, 601 Barrington Ct., Newbury Park, CA 91320
CO-008 George H. Wagner, 3650 S. Federal #115, Englewood, CO 80110
FL-032 Gerry, Naples, FL
FL-036 Charles, Miami, FL 33155
FL-037 E. William Flanagan, 1807 Penman Rd., Jacksonville Beach, FL 32250
GA-013 Alvin Hockaday, P.O. Box 8035, Columbus, GA 31908
GA-014 David Parr, 3609 Fortingale Rd., Chamblee, GA 30341
GA-015 Andy Pless, 2203 Plaster Rd. #H-8, Atlanta, GA 30345
IA-012 Carl M. Walker, 2504 N. Ohio Ave., Davenport, IA 52804
IL-067 Pam Wylie, 3245 Eshcol Ave., Zion, IL 60099
IL-070 Galen Hosselton, R.R. 2 - Box 109, Clay City, IL 62824
IL-071 Joy, Park Forest, IL
IL-072 Heinz K. Bausback, 0384 Hoag Court, Mundelein, IL 60060
IN-017 Michael T. Bradley, 1225 So. Emerson Ave., Indianapolis, IN 46203
IN-020 Jerome A. Miller, 401 W. Wilkinson St., Goshen, IN 46526
KS-007 W. Neil Clendenin, 6619 Ballentine Ave., Shawnee, KS 66203
KY-005 Robert X. West, 41 Roselawn Dr., Independence, KY 41051
KY-006 James E. Collins, 119 Mockingbird Lane, Bardstown, KY 40004
LA-007 Chester Williams, 1834 Cambronne St., New Orleans, LA 70118
LA-008 Donnie G. Giles, P.O. Box 192, Plain Dealing, LA 71064
LA-009 Jerry Rathburn, 225 Seal Dr., Arabi, LA 70032
MA-027 Bruce Julian, 23 Forest Ave., Essex, MA 01929
MA-028 Stephen Kozloski, Jr., 11 Parsons St., Easthampton, MA 01027
MA-029 William M. Mullowney, 62 Woodlawn St., Everett, MA 02149
MA-030 Welden E. Rogers, Apt. 2, 125 Trapelo Rd., Belmont, MA 02178
MA-031 Paul R. Nicholson, 39 Southside Ave., Lynn, MA 01905
MA-032 John S. Babula, 19 Crotteau St., Adams, MA 01220
MI-026 Dan Sullivan, 620 Cranbrook Dr., Saginaw Township, MI 48603
MI-028 Frederick Marciszewski, 8195 Webster Rd., Clio, MI 48420
MN-012 M. L. Sundberg, 312 Madison Ave. So., Hopkins, MN 55343
MO-012 E. S. Miller, Director, Belton Civil Defense, c/o 300 Airway Ln., Belton, MO 64012
NH-009 Lawrence M. Duval, 53 Elm St., Milford, NH 03055
NJ-032 James J. Mann, 112 Lake End Rd., Green Pond, NJ 07435
NY-071 Robert G. Caballes, 41-31 51st St. #2-D, Woodside, NY 11377
NY-072 Bryan Cunniffe, Apt. #4C, 420 West 206th, New York, NY 10034
OH-032 David D. Hunt, P.O. Box 188, Lorain, OH 44052
OH-034 Jerry Hurd, 4750 Ridgewood Ave., Norwood, OH 45212
OH-035 Richard W. Dorn, 1616 Frank Rd., Columbus, OH 43223
PA-039 Jeffrey Bail, 2018 Tyson Ave., Philadelphia, PA 19149
PA-040 Paul Bastian, Jr., 137 Watkins Ave., Pittsburgh, PA 15202
TN-004 Eddie Stair, 604 Randolph Apt. #7, Clinton, TN 37716
TN-005 John P. Creel III, 1712 Clayton Rd., Chattanooga, TN 37412
TX-030 Jerry D. Cope, 10150 Brinwood, Houston, TX 77043
WA-014 Brian Aase, 1004 Loveland, Mukilteo, WA 98275
CAN-028 Magella Tardif, 137 René-Philippe, Lemoyne, Quebec, Canada J4R 2J9
CAN-029 B. J. Corney, #7 1418A First St. S.W., Calgary, Alberta, Canada T2R 0V8
CAN-030 Roger Roy, Box 685, Basin Rd., Bathurst, N.B., Canada E2A 3Y8
CAN-031 Guy Vallee, P.O. Box 112, Borden, Ontario, Canada L0M 1C0

The Radio Communications Monitoring Association is a radio club for persons interested in listening to two-way communications above 30 MHz as a hobby. RCMA was founded in May 1975 and is a Full Member of the Association of North American Radio Clubs (ANARC).

The goals of RCMA are:

1) To provide a fraternity for those who seriously pursue the hobby of monitor radio listening.
2) To try to be knowledgeable about two-way radio systems and operations.
3) To promote an understanding of the legal and ethical uses of monitor receivers.
4) To share information with and help other monitor radio listeners.
5) To try to understand and improve receivers, antenna systems and related equipment.
6) To offer suggestions and formal recommendations to manufacturers of monitor receivers and to manufacturers of other products related to the hobby.
7) To offer suggestions for and encourage the organizing and conducting of RCMA meetings and tours for groups in any geographic area.
8) To encourage and to facilitate contact between members.
9) To publish a regular club newsletter devoted to the hobby.



RCMA
P.O. Box 4563
Anaheim, CA 92803

ADDRESS CORRECTION REQUESTED
RETURN POSTAGE GUARANTEED

BULK RATE
U. S. POSTAGE
8.4¢ PAID
ANAHEIM, CA 92803
PERMIT NO. 397

RUSH -- ITEMS OF NEWS VALUE